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INTERNATIONAL

FORMULA ONE

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LE MANS

Porsche economy run

ACROPOLIS RALLY

Peugeot back to normal

F1 POWERBOATS

8 pages

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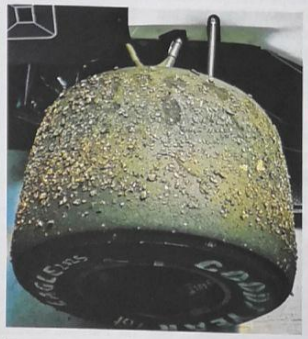

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In this issue, a PRO ONE insert (pages I-VIII) between pages 80 and 89. PRO ONE s.a., Dominique Schwarts, Brussels (2) 648 50 76.

TOPICS

Thierry Boutsen will be taking part in the Group A Francorchamps 24 Hours at the wheel of a Brun Motorsport BMW 635.

Ivan Capelli hopes to compete in the last three rounds of the CART championship in a Mo Nunn Ensign Theodore.

Peter Gethin who left March for the F1 Toleman team is a free agent once again. He intends to create his own F3000 team.

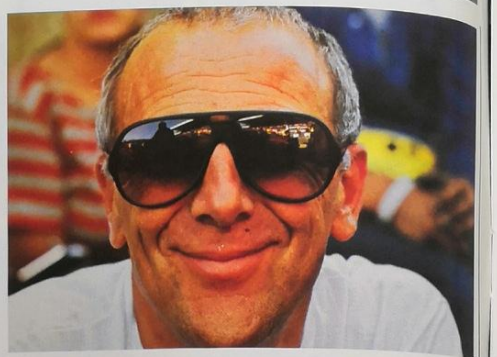
Jan Lammers present at Indianapolis revealed that he would like to compete in the CART series in which fellow Dutchman Luyendijk is already taking part. He has been discussing the matter with the Sherman Armstrong team and if he gets a contract the former F1 driver will race their March 85C/Cosworth.

Lars-Erik Thorp the young Swedish rallyman has signed on with the official Nissan team to drive a 240 RS at the New Zealand Rally from June 27 - July 3.

The organisers of the New York Grand Prix scheduled for September 22 have finally asked FISA to postpone their event until next year.

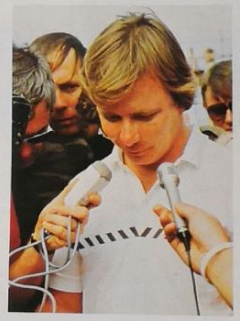
Ford competitions director Mike Kranefuss has revealed publically that the F1 Lola Beatrice to be driven by Alan Jones later this season will be powered by a Ford V6 turbo designed by Ford-USA in close association with Cosworth-England. Ultra-light and compact it is hoped that the Anglo American turbo engine will be ready for Jones to race at his home Adelaide GP on November 3rd. Lola Beatrice have signed a two-year contract with the American constructor to supply them with their motor.

20th TIME AROUND



At the ripe old age of 48 Jaguar driver Claude Ballot Lena was not the oldest participant at this year's Le Mans 24 Hours but he holds the record for the number of starts. This year's marathon race was his 20th consecutive attempt at the title. He has won twice at the Spa-Francorchamps 24 Hours and at Daytona but never in France. His best placing was a 3rd at the wheel of a Porsche 935 in 1977. Better luck next time!

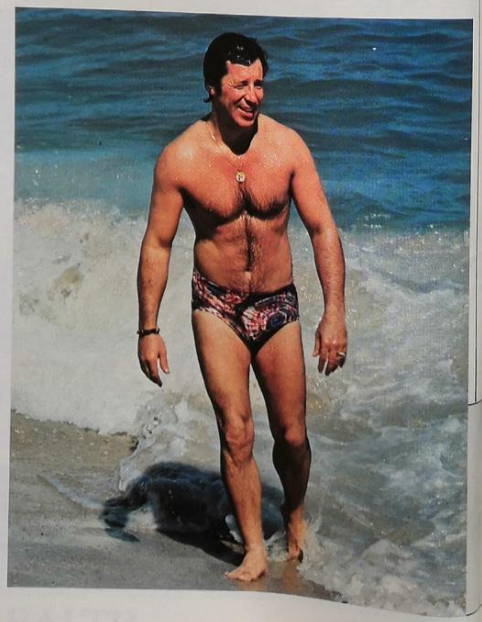
PIRONI BACK IN A F1!



Miracles do happen! Didier Pironi was invited to get behind the wheel of the Williams FW08 with which Rosberg clinched the World Title in 1982 by motor sport enthusiast Jean Snetton (Pioneer) at his private track in the Parisian suburbs.
It was ironical that the first F1 racing car Didier should try after his horrific accident on August 8, 1982 during testing for the German GP, was the one which took the World Crown he was in contention for. The Ferrari driver whom everyone believed would win the Championship received severe leg injuries and was lucky to escape amputation.

Didier Pironi has always announced his firm intention (see GPI's Post Bag issue No92) to return to F1. After the testing session in early June, he said that he had a little difficulty with the foot pedals but was otherwise more than satisfied. The Frenchman has often declared that he will only make his comeback to F1 the day he feels he could legitimately hope to become the World Champion. He is the one who will decide and GPI will keep you informed.

PORTLAND 500 MILES



Mario Andretti won at the Portland 500 Miles, round four of the Indy Championship. It was the American's third victory of the season. Danny Sullivan put in the fastest qualifying time and Andretti the 4th.
Sullivan led the race for four laps until he was forced to retire with chronic steering problems. By mid-distance Bobby Rahal was in control of proceedings and after 20 laps he, too, had to pull out when his engine developed an oil leak.
Thereafter Andretti and Al Unser Jr passed and repassed each other as they both fought for command. Andretti finally took the lead 20 laps from the chequered flag and progressively built up a solid lead on his younger opponent. Former F1 driver Emerson Fittipaldi finished 3rd.
Mario Andretti now has a total of 45 Formula Indy wins to his credit and looks set to break the 50-wins record. He is presently leading the Championship with 81 points against Sullivan's 47.

F1 TALKS

The F1 commission got together at Montreal to discuss various points in preparation for the FISA Executive Committee meeting to be held on June 24. This year's F1 calendar was one of the eighteen topics on the agenda as a result of the almost definite cancellation of the New York Grand Prix which was due to be held on Septembre 22. To all intents and purposes it will be replaced by a European Grand Prix at Brands Hatch during the same weekend. The Americans declare that they will be unable to create a track in time for FISA's inspection 60 days before the event itself.
As for the postponed Belgian Grand Prix, it should be wedged in to take place on September 15, between the Italian and European rounds. Three Grands Prix in three weeks! Renault, for one, are going to be pleased — they'll have some eighty V6 engines to prepare for the four teams they supply! Since the Belgian event was only suspended, qualifying on the new weekend will officially begin on Saturday morning as the first session which took place on May 31 at Spa will count for establishing the starting grid order. It's unlikely that drivers will improve on the fastest lap times. The Ardennes weather at that time of the year is always a little uncertain. Anyway, at least Alain Prost should be able to qualify...

MONROES WINS AT INDY

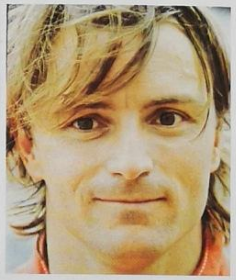
Monroe's overwhelming superiority at the "brickyard" was demonstrated again on May 26, when the Indianapolis 500 race went to a car equipped with Monroe shock absorbers for the 21st time in 26 years.
Winner Danny Sullivan drove his March Cosworth round the oval at an average speed of 152.982 mph.
There were twenty-two Monroe-equipped cars at the start. Two finished in the first three and six in the top ten.

RESULTS

1. Mario Andretti (Lola Cosworth) 200 miles/320 km at an average speed of 172.950 kph/108.1 mph. 2. Al Unser Jr (Lola Cosworth), 3. Emerson Fittipaldi (March Cosworth), 4. Al Unser Sr (March Cosworth), 5. Kevin Cogan (March Cosworth), etc.

ARNOUX/TOLEMAN HOAX

The Italian press's hopes for an Arnoux/ Toleman marriage have been founded on thin air. Toleman team manager Peter Gethin declared, *"We would be only too pleased if René Arnoux joined our team. Unfortunately, though, somebody has been spreading rumours and we haven't even been in touch with the Frenchman."*



WOLLEK JINXED

Bob Wollek loves Endurance racing more that most. He has competed in the world famous French 24-hour event 15 times, finishing 2nd in 1978. He has driven for the official Alpine, Matra, Porsche and Lancia teams but has never actually won. "*When I left Kremer at the end of 1978,*" reminisced Bob, "*they won the following year. I left Joest when the 1983 season closed and they won in 1984. They asked me if I'd like to race with them again this year and I refused. And they won!*" If the Frenchman signs with some other team for next year Lancia may at last pocket the title...

THE SPA DILEMMA

Perhaps prematurely, Fleet Street screamed that the disgraceful state of the Spa-Francorchamps circuit somehow displayed motorsport's inability to run itself. While there is no doubt that the Spa authorities, in resurfacing their circuit so close to the date of the Belgian Grand Prix, broke the rules both of FISA and of common sense, enquiries may show that the resurfacing operation was deliberately concealed from FISA.
In fact, one encouraging factor of the Spa farce was FISA's recognition of the anxieties of the twenty four out of twenty six F1 drivers present who believed that it would be dangerous to wait until Sunday before deciding whether the track was fit to let the race go ahead. What a contrast with Barcelona in 1975, when officials of the CSI (as it then was) stood by and allowed the Spanish authorities to blackmail the drivers into racing on a circuit which, like Spa, was clearly not in conformity with the CSI's own rules.
It was surprising, however, that FISA permitted the powerful F3000 cars to try and put on a show in place of the F1s. Technically, the F3000s were competing in a separate race meeting. Nevertheless, while their shorter event may have provided a small remaining number of spectators with something to watch, it could never have been a real race. Furthermore, the decision to let it go ahead would have been difficult to justify afterwards if there had been a serious accident on the crumbling track.
By allocating a September date to Spa for a re-run of its Grand Prix, FISA undoubtedly let the circuit off the hook as far as its many potential creditors were concerned. It seemed paradoxical that Brands Hatch, which is ready and willing to stage what will surely be an excellent European Grand Prix on September 22, should have been penalised by FISA's ruling at Spa's postponed race take priority. Questions now may be asked whether this was done in response to pressure exerted by F1's Constructors' Association, which was involved commercially as the promoter of the Spa event.
Our sport is indeed very far from being perfectly organised, and F1 would be greatly enhanced if FISA insisted on a calendar and circuit inspections that were fixed well in advance. Meanwhile, FISA deserves all the criticisms it gets for allowing itself to be implicated in nonenses like Dallas last year and illusive events like the New York Grand Prix, on circuits that don't even exist.

KEN TYRRELL GETS RENAULT POWER

Founder and head of the Tyrrell team Racing Organisation Britain's Ken Tyrrell has been in motor racing since the 1950s when he drove as an amateur in the former 500cc, Formula 3 and 1500cc Formula 2 categories.

Tyrrell then went on to manage his own Formula Junior, Formula 3 and Formula 2 teams successfully between 1959 and 1967. Some of the world's finest racers such as Jackie Stewart, John Surtees, Didier Pironi, Jody Scheckter, Patrick Depailler, Ronnie Peterson and Michele Alboreto have raced for Ken who has earned himself a reputation as a great talent scout over the years.

Tyrrell entered F1 in 1968 with the backing of Elf for his Ford-Cosworth-engined Matras. He won the Constructors' Championship for Matra in 1969 together with the Drivers' Championship. He then decided to build his own cars. The first Tyrrell F1 car was revealed at the Canadian round of the 1970 World Championship. The following year Tyrrell's drivers, Jackie Stewart and François Cevert, finished first and third respectively in the World Drivers' Championship and he clinched the World Constructors' crown.

Derek Gardner designed all the Tyrrell GP cars until 1977 and Maurice Phillippe has had the task since 1978. Tyrrell team has an impressive GP record — three World Drivers' titles, two World Constructors' crowns and thirty three GP wins. Tyrrell's most recent GP win (and the last for the 3-litre Cosworth engine) was at the 1983 Detroit GP.

On June 3, the new Tyrrell Renault 014, the first-ever turbo charged Tyrrell GP car was officially announced in a statement to the press. The Renault turbo-charged engine will give the new car at least 200 bhp more than its predecessor, the Cosworth-engined Tyrrell 012.

The announcement follows the signing of a two-year contract between Tyrrell and Renault Sport whereby the French constructor will supply the British team with their engines until the end of 1986.

Tyrrell's decision to use turbo power means that the 1985 GP season will have seen the disappearance of the normally-aspirated Cosworth engine which once dominated F1 motor racing for so long.

The highly talented Martin Brundle and Stefan Bellof, Tyrrell latest *protégés*, will be testing in June and the new car will be raced at the earliest opportunity.

The car has been specifically designed to feature either the modified EF4 or the EF15 engines. Commenting on Renaults' success this year (two wins and four third places in the first four GPs), Tyrrell added. "*We have had to wait a long time to go turbo. But it has been worth the wait to get the right engine.*"

TECHNICAL SPECIFICATION

MONOCOQUE

For the monocoque of the first purpose-built turbo-engined Grand Prix car by Tyrrell, a high degree of torsional stiffness was regarded as essential. The resulting composite structure is a mixture of carbon and aluminium materials utilising the experience of the previous 012 chassis. Courtaulds carbon fibre is combined with aluminium honeycomb to produce an extremely stiff yet lightweight structure. As with 012, aluminium alloy bulkhead frames, machined from solid, absorb all the front suspension and steering loads.

The forward section ahead of the driver's feet has been given special attention and readily meets and exceeds the F.I.S.A. frontal impact requirements.

SUSPENSION

Front suspension is a pull rod system developed from earlier Tyrrell experience. Koni, gas filled, adjustable shock absorbers, with "concentric" road springs, are mounted vertically within the confines of the very narrow forward monocoque, and are controlled at their lower end by curved tracks and needle roller followers.

Rear suspension is also pull rod, and similar in operation to the front except that the curved damper control tracks mount directly to the gearbox casing. All wishbone anchorages are directly on the gearbox case. In order to suit the demands of turbo power, both front and rear tracks are near to the maximum allowed by the rules, and have been successfully tested on 012.

Tyres are by Goodyear.

BRAKES

Carbon disc brakes and pads by Automotive Products are utilised all round, the rear brakes being mounted inboard, with calipers directly fixed to the gearbox housing.

STEERING

A Tyrrell-designed rack and pinion utilises a magnesium housing and an aluminium alloy universal joint in the steering column.

ENGINE

The car is designed to suit both EF4 and EF15 Renault V6 turbo-charged engines. The installation of both engines is made in accordance with the recommendations by Renault Sport. Lubricants and fuel are by Elf. Spark plugs by Champion. Wiring loom by Raychem.

TRANSMISSION

The transmission is a completely new Tyrrell 6-speed gearbox designed to suit the requirements of the Renault engine. The design was derived from an earlier 6-speed transmission which was developed by Tyrrell during 1984 specifically for a turbo-engined car and which was used extensively on 012.

The main magnesium alloy housing of the new gearbox incorporates the engine oil reservoir, all suspension anchorages, clutch release mechanism and housing, and the mountings for the spring/damper units, brake calipers, anti-roll bar and rear wing pylon.

ENGINE COOLING

Main engine cooling is achieved via twin Unipart water radiators in the sidepods, with the cooling air exiting laterally. Customary twin charge air intercoolers are also mounted in the sidepods behind the radiators. Oil cooling is achieved through two water/oil heat intercoolers located in the sidepods.

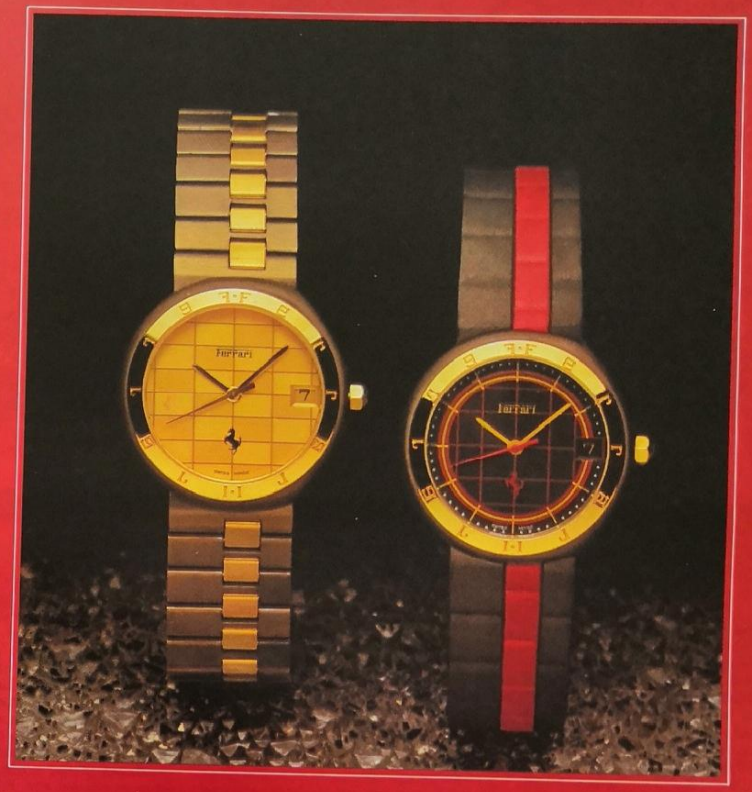
BODYWORK

All body panels are manufactured in lightweight Courtaulds carbon composite materials, including the front and rear wings and their respective end fences.

The side panels are produced by Seger & Hoffmann AG, a wholly owned subsidiary of The Dow Chemical Company, using Courtauld carbon fibre and Dow resin systems.

Main dimensions and data

	Inches	*CM*
Overall Length	171.25	435.0
Overall Width	83.00	210.8
Overall Height	39.37	100.0
Front Track	69.50	176.5
Rear Track	64.50	163.8
Wheelbase	108.50	275.6
Engine	1/2 litre V6 Renault EF4 or EF15	
Transmission	Tyrrell 6-speed	
Clutch	7 1/4" Dia twinplate	
Brakes	11" Dia carbon discs by A.P.	
Tyres	Goodyear	
Fuel and Oil	Elf	
Carbon Fibre	Courtaulds	
Spark Plugs	Champion	
Shock Absorbers	Koni	



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A palette of innovative dial faces gives the Ferrari watch its sporty, thoroughbred stamp.

All models feature a quartz movement and are water-resistant to 30 m (3 ATU).

Inspired by the history of the forms and colours of the brand in all the Ferrari Formula creations.

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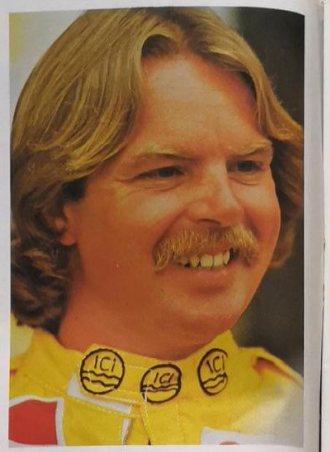
Graffiti



by Mike Doodson

Helen Stewart, wife of the Scot who won his third world championship in 1973, made a rare (and pretty) appearance in the Elf Press hospitality enclosure at a recent Grand Prix. Before any of the assembled hacks could compliment *La Belle Hélène* on how she had changed not at all over the years, she smiled and beat us to the gun. *"You know,"* she said wickedly, *"everything in racing is different since Jackie retired. The teams, the cars and the engines. The only thing that's still the same is you lot. The same faces among the Press, just the hair getting a little greyer..."*

Well, after an absence of almost twelve months, the Graffiti column has changed a bit, too. GPI has come under New Management, so too has this column. Its origins date back to what we now refer to as the Expensive Era of the magazine, Which Could Not Last. The column's title itself (see above) was designed by a Frenchman, who would be astonished to learn that his work has since been immortalized in red neon outside a spaghetti joint called Graffiti in Melbourne, Australia. And most of the names that you will remember from the Era That Could Not Last have moved on.

Ex-editor Braillon, always a glutton for hard work, is now writing incredibly detailed press releases about the technical features of Skoal Bandit RAMs (and he still can't spell John *Macdonald's* surname). Asset continues to photograph racing cars so beautifully and so discreetly that no one ever notices he was there. By contrast, Botsford, long of hair and dark of hat, fills Press Rooms everywhere with hysterical laughs that we only hear on practice days, because the Sunday Times (his paper) reports qualifying, never the race results. This quaint approach means that ST readers still don't officially know whether it was Prost or Lauda who won the 1984 world championship...

Since this column, in its brief first incarnation, was shaped by Keith Botsford in his personal style, let's stay on the subject. As he will tell you, Bottie only goes to the races for light relief between exercising his many other talents. *Inter alia*, these include writing powerful, and anonymous, works of detective fiction. He has, however, consented to have his name put alongside that of Keke Rosberg on the cover of "Keke", their long-awaited biographical co-production. My colleague Eoin Young, who was favoured with a review copy, wrote that it is a good read, with a generous 50 per cent of its content devoted to the life and views of the 1982 world champion. Bottie himself has asked me to commend *Keke* to GPI readers: it is being peddled by Hutchinson at (he thinks) £8.95.

Keke has already collaborated in the writing of a book about himself, much of it culled from the letters and messages which he sent to his father in his gypsy days between 1974 and 1978 when he was globe-trotting with American entrant Fred Opert (*"Have crazy Finn and Formula Atlantic Chevron, Will Travel"*). Not so many years before, Rosberg and his old man used to travel thousands of miles together racing karts, so they have a particularly close relationship which I'm told is reflected in this earlier book. Alas, it's available only in Finnish and French.

With the new book, too, Keke has taken a close interest. *"I've read every sentence in it,"* he told me at Spa. *"More precisely,"* he added, *"I've changed every sentence in it! In fact the final editing session lasted three hours over the phone between Helsinki and London starting at half past midnight."*

Monaco is not my favourite race on the calendar, due entirely to the rapacity of the hoteliers and restaurateurs, all descendants of the pirates and brigands who colonised the Principality a few hundred years ago. A modest hotel near the railway station demanded no less than £255, their minimum five-night fee, for the two days that my wife wished to share my hotel room. They didn't even have the good grace to haul down the skull and crossbones when we decided instead to stay in Nice (equally modest, but only £18 a night, and the concierge didn't have a parrot on his shoulder).

There was a man at Monaco with a radar gun pointed at the exit of the tunnel who said he'd clocked Eddie Cheever at 180mph. Like most of the figures recorded by such devices, the Alfa's muzzle velocity sounded far-fetched. Then it was confirmed by one of the speed traps operated by an F1 team. Judging from these speeds, and from the harum-scarums during the race that sent wheels flying dangerously close to all those punters in their grandstands, Monaco as a circuit is going to need a major security re-think soon. Maybe the Automobile Club will even come to the conclusion that Bernie and the Brits were right in 1979/1980 when they forecast that French insistence on turbocharging as the Formula of the future was misguided and wrong.

At that time, the only F1 turbo was Renault's. Having several seconds of throttle lag, it was a fiendishly difficult engine to drive. Jody Scheckter dubbed the car the "yellow teapot", because of its tendency to brew up suddenly. Indeed, one of the Renault mechanics used to have a six foot metal rod with an asbestos bung on the end that he shoved up the exhaust like a suppository to stem the oil fires that resulted from blow-ups, which were frequent.

Another nasty habit of those first turbos was the earth-shaking boom, like cannon-fire, which they let off when the wastegate opened at high revs. Even when they were running right, the sound they made was like amplified indigestion, punctuated with the wastegate flatulence. Well, Renault tamed their turbos, didn't they? Watching the Lotuses and others charging so impressively up the hill away from *Eau Rouge* at Spa during first practice on Friday, I was reminded not only of the reason (cowardice) why I'm a journalist and not a racer, but also of the improvement in sound of turbos, which these days are good and noisy.

Alas, we weren't to hear much more of those delightful sounds echoing off the pine trees. It took the drivers eight minutes (my timing) of the "untimed" Saturday morning session to decide that the track wasn't safe to race, and — scandalously — another eight hours for the Stewards of the Meeting to reach the same conclusion.

No doubt Monsieur Camus will have explained all the nitty-gritty of the Spa catastrophe in a gloriously good read elsewhere in this issue. I can say that I had something of a premonition that the weekend might go wrong when I saw the temporary road signs directing traffic along the deviations created to avoid the circuit itself, part of which uses public roads. Two of the signs read *"Mamledy"* and *"Autres Directoins"*. No wonder the French tell Belgian jokes like we tell the Irish ones.

The Belgian GP does not enjoy a very good record when it comes to laying road surfaces. It was the fiasco at Zolder in 1973, when everyone except Jackie Stewart flew off the crumbling road surface, that helped persuade FISA to introduce the rule that prohibits resurfacing of a race track within the 60 day period before a Grand Prix. Less well remembered by car racing fans was the fact that Spa itself had already cocked up the motorcycle GP in 1979, début year for the shorter, "new" circuit. The fresh asphalt sweated an oily substance which caused several riders to tumble off their machines during practice.

As usual in bike racing the race officials were in cahoots with the circuit owners, and they deliberately fif-faffed around for two days, knowing that once the spectators had arrived they would be able to blackmail the riders into taking unacceptable risks with their lives and go racing. Barry Sheene and Kenny Roberts boycotted that race, but it went ahead with the privateers.

This time we stood around from 11 o'clock in the morning on Saturday waiting for the Stewards to reach what should have been an obvious decision. With so many commercial interests at stake, however, no doubt the circuit owners were bringing pressure for the race to take place. And when it became obvious that the Grand Prix would have to be cancelled, someone resorted to telling lies. At 6 o'clock on Saturday evening, 90 minutes before the Stewards announced the race's cancellation, Anthony Marsh and his Belgian public address colleagues, were instructed to say that Sunday's programme would go ahead "as planned."

The Spa circuit authorities later (much later) issued statements which admitted that the circuit had been resurfaced inside the regulation 60 day limit, pleading that they'd had a hard winter and there was snow on the track in May, etc, etc. They didn't identify who was ultimately responsible for the decision, but a leaflet distributed to us on Friday did. His name is André Haudestaine, and there was even a photo of him puffing on a ciggie.

M Haudestaine is the President of ISF (Intercommunale Circuit Spa-Francorchamps), a Cooperative Society set up in 1948 for the exploitation (their word, not mine) of the Spa circuit. Since the ISF officially claims to represent "the Belgium (sic) State, the French-speaking community of Belgium, the province of Liege" and several other wealthy municipalities, I suspect that ISF, unlike some other circuit owners, has excellent financial backing.

If you were one of the many fans who made a fruitless journey to the Belgian Grand Prix, your solicitor or attorney might find that a writ addressed to M Haudestaine at 280, route de l'Eau Rouge, 4878 Francorchamps, would be the first step to compensating you for a fiasco which would easily have been avoided if someone had applied common sense to the surface of the race track, instead of chewing gum. ■

DANNER SAVES THE SHOW!

THE F3000 ENTRY LIST FOR THE PAU GRAND PRIX WAS EVEN UNHEALTHIER THAN USUAL. THIS TIME, ONLY ELEVEN CARS ACTUALLY TOOK PART IN THE RACE WITH ONLY FIVE OF THEM AT THE FINISH. JUST AS WELL DANNER PUT IN A SUPERB FINAL SPRINT WHICH MADE UP FOR EVERYTHING.

Spectators flocked to the French street circuit of Pau in their thousands to admire the much-talked about F3000s in action. Only fifteen cars went through scrutineering but there had been quite a few changes since the Italian round at Vallelunga. Alain Ferté was at the wheel of a brand new Onyx March whilst Hytten was given Dumfries's second Onyx March to drive. Fangio was the sole representative of the Lola clan. Dacco replaced Del Castello and Capelli inherited Santin's San Remo Racing March. Jean-Philippe Grand had come to get his first taste of F3000.

Pirro put in a fastest qualifying time of 1m 12.65s ahead of Thackwell in the Ralt. The two Ferté brothers were side by side on the second line, this time both were driving March 85/Bs.

During the warm-up on Monday the track was dry although dark clouds were racing from one side of the horizon to the other. Italy's up and coming Tarquini put in some impressive lap times but he went off the track, betrayed by a defective wheel hub. His team mates Capelli and Dacco were found to have similar fissures on their cars hubs and had to come to terms with the fact that they wouldn't be racing. Which left only eleven cars to come under starter's orders as new-comer Grand was another non-starter when a fire broke out.

Once the green light showed, Pirro dashed off with the lead followed by Ferté, Thackwell and Nielsen in the Ralts, Alain Ferté, Streiff, Leoni, Grouillard and Danner — the future winner! Fangio was the first to retire when he spun off and Hytten also pulled out three laps later, when a valve went.

On lap 3, New Zealander Thackwell clipped M Ferté as he tried to get past and was forced to retire whilst the Frenchman went back to the pits for all of four laps to get his front track checked.

The order on lap 5 was Pirro, 2s ahead of Nielsen and 4s ahead of Streiff, who'd managed to brave his way round A Ferté. In the skirmish that followed between Nielsen and Pirro for command, the Dane's car suffered a heavy bang and out went "Super John"! Ferté and Streiff then brushed shoulders with the result that 2nd gear was no more on the AGS, a definite handicap on a twisty track like the street circuit of Pau.

On lap 10, there were only five cars in a fit state of racing — and it was a 72 — lap race! Pirro was out in front, keeping the diminished field in control. A Ferté was hardly in a position to attack as he'd fallen foul of brake problems. Leoni hung on to 3rd place. Danner, in 4th, got the bit between his teeth and forged ahead to sail past Grouillard and then on lap 24 he devoured Leoni. Ferté had lost 3rd gear (!) and the German found himself chasing after the leader Pirro, 14s ahead.

Danner inexorably clawed his way up so that by lap 55 he was under the Italian's gearbox. With twelve laps to the finish the German powered off to his maiden-F3000 victory. Pirro, however, said that his engine had been overheating excessively and a quick look revealed that dead leaves had got into his side pods. The BS Automotive car's mechanics had taken the precaution of fitting a small grill at the inlet for Christian. It's amazing when you think how some races are won! ■

F3000 PAU STARTING GRID

1. Pirro March 85/B 1m 12.65s	2. Thackwell Ralt RC 1m 12.71s
3. M. Ferté March 85/B 1m 12.83s	4. A. Ferté March 85B 1m 13.12s
5. Nielsen Ralt RC 1m 13.21s	6. Streiff AGS JH20 1m 13.47s
7. Grouillard March 85B 1m 14.25s	8. Capelli* March 85B 1m 14.30s
9. Leoni Williams FW08C 1m 14.34s	10. Danner March 85B 1m 14.42s
11.Hytten March 85B 1m 14.54s	12. Fangio Lola T950 1m 15.33s
13. Tarquini* March 85B 1m 15.85s	14. Grand March 85B 1m 16.30s
15. Dacco* March 84B 1m 16.46s	

The three San Remo Racing cars forfeited their entries. Tarquini went off during the warm-up when a wheel hub broke and checks on the other team cars' wheel hubs showed up fissures. Alberto Colombo therefore decided to withdraw his cars.

RETIREMENTS

Warm-up lap: **Grand:** fire; Lap 3: **Thackwell:** tangled with M. Ferté; Lap 4: **Hytten:** valves; Lap 11: **Nielsen:** front left suspension; Lap 32: **A. Ferté:** engine overheating; **M M. Ferté:** rev limiter; Lap 52: **Fangio:** spun off.

F3000 CHAMPIONSHIP RESULTS POINTS (Results after five rounds)

1. E. Pirro 27 points; 2. Nielsen 21 points; 3. Danner 17 points; 4. Thackwell 15 points; 5. M. Ferté 14 points; 6 Tarquini 8 points; 7. Grouillard 7 points; 8. Streiff and Leoni 4 points etc.

FINAL RESULTS

1. Christian Danner (March 85/B Ford DFV), 72 laps or 198.72 km/124.2 mph, 30m 28.6s at an average speed of 131 kph/82.363 mph; 2. Pirro (March 85B/Ford DFV) 1 hour 31m 10.3s; 7. Leoni (Williams FW08C/Ford DFV) 1 hour 31m 28.2s; 4. Grouillard (March 85B/Ford DFV) 1h 31m 32.1s; 5. Streiff (AGS JH20/Ford DFV) 71 laps. **Not classified:** Fangio (Lola T950/Ford DFV); M. Ferté (March 85B/Ford DFV) 27 laps; Nielsen (Ralt RC 85/Ford DFV) 8 laps; Hytten (March 84B/Ford) 3 laps; Thackwell (Ralt RC85/Ford DFV) 1 lap. **Race Lap Record:** Danner (March 85B/Ford DFV) in 1m 13.26s at an average speed of 135.626 kph/84.766 mph.

The F3000 gang. Pleasant chaps aren't they?!

Philippe Streiff (AGS) managed to scrape home to notch up two points (top).

Lap 62: Danner has just slipped past Pirro, in trouble with an overheating engine. Note the wire mesh on the German's side pods.

BURLESQUE!

THE F3000 BOYS PROVED THEY WERE A BOLD BUNCH AT SPA-FRANCORCHAMPS. THEY BRAVED THE TREACHEROUS TRACK CONDITIONS TO SATISFY THE FEW SPECTATORS THERE THAT WEEKEND WHO HAD REALLY COME TO WATCH THE F1 RACE. IN VIEW OF THE CIRCUMSTANCES, THEY COULDN'T HAVE DONE A BETTER JOB. WELL DONE!

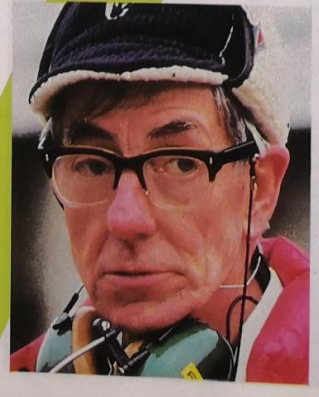
The Formula 3000 race had originally been scheduled to take place on the Saturday of the Belgian Grand Prix weekend, but since FISA were forced to postpone the F1 race in view of the worsening track conditions (see separate story), the F3000 boys were given the go-ahead, for Sunday, in place of the F1s. Certain portions of the track were patched up during saturday night but conditions were just as slippery on race day.

Championship leader Emmanuele Pirro pointed out that, *"It's like driving on ice out there. You can't hit the throttle pedal until you've completely exited out of the turns."*

The marshals had been out sweeping the track after the warm-up to rid the road of "marbles". The drivers realised that they should never have accepted to race in such conditions, but it was too late.

Michel Ferté charged away at the start ahead of brother Alain, with Pirro, Streiff, Thackwell who'd flunked his start, Tassin, Nielsen and Danner behind. Race lap times were a good 15s slower than during Friday's qualifying runs. Some turns had to be taken literally at a snail's pace.

On lap 3, Michel had a 2s-lead on his brother whilst Pirro held on hard to his third place, some 55s behind the leader. Streiff, however, was giving the spectators an impressive show as he swung the rear of the AGS through the turns, locking up all four wheels at the braking areas. Thackwell, rather more cautious, had finally adopted a respectable rhythm and began



was alone, ahead of a fierce pack led by Tarquini, Capelli, Danner and Grouillard. The Pirro/Streiff duel soon ended with suspension problems for both cars. Michel Ferté came to grief when his wheels bit the trackside dust sending him straight into the armco barrier. Ditto for Capelli, Grouillard and Tassin two laps later.

Halfway through the race there were only ten cars left. Alain Ferté had a narrow escape when he too drove slightly off the track, but his car only left a little paintwork on the rails. In the meantime, Thackwell had sailed past the Frenchman and into the lead. His team mate had made up the lost ground on Ferté,

gaining on the leaders. Nielsen motoring along at a safer pace after his scare, but the Bridgestone brigade seemed to be sliding around less than their Avon-tyred rivals. Ferté "major" went on to wage a terrific war against Tarquini and Danner, but it was the Pau winner from Germany who finally came out top. Whilst the New Zealander in the leading Ralt was keeping his car going where he wanted it to, Nielsen's oil pressure suddenly dropped and for the Dane, it was all over, meaning that the elder Ferté found himself promoted unexpectedly into 2nd place, 50s behind the Kiwi. Danner crossed the line in third position whilst Tarquini (4th), Dacco and Fangio made sure they finished. ■

Mike Thackwel (Ralt RC85)

Ralt man Ron Tauranac himself — "F3000 needs more publicity and television coverage to get the sponsors interested" (left page).

Alain Ferté (March 85B) is a changed man since he's got his new car. Here he leads the pack round the slippery track (top)

Leoni (Williams FW08) and Grouillard (March 85B) vie for their grid slots (bottom).

QUALIFYING

M Ferté (March 85B) 2m 11.195s A; A. Ferté (March 85B) 2m 11.366s B; Thackwell (Ralt RC85) 2m 11s 438s B; Pirro (March 85B) 2m 12s 202 B; Streiff (AGS JH20) 2m 12s 333 B; Danner (March 85B) 2m 12s 467 B; Tassin (March 85B) 2m 12s 467 B; Nielsen (Ralt RC85) 2m 13s 247 B; Tarquini (March 85B) 2m 14s 426 B; Capelli (March 85 B) 2m 14s 071 B; Leoni (Williams FW08) 2m 14s 105 A; Hytten (March 85B) 2m 14s 206 B; Dacco (March 85B) 2m 14s 707 B; Fangio (Lola T950) 2m 14s 707 B; Fangio (Lola T950) 2m 15s 707 B; Dumfries (Lola T950) 2m 15s 159 A; Grouillard (March 85 B) 2m 15s 530 A; Borgudd (Arrows A6) 2m 17s 614 A; Grand (March 85B) 2m 18s 940 A.

RETIREMENTS

Lap 3: **Pirro**, (front suspension); **Streiff** (rear suspension); Lap 4: **Capelli** (off) **M Ferté** (off); Lap 6: **Grouillard** (off); Lap 8: **Tassin** (off); Lap 11: **Hytten** (differential); Lap 12: **Borgudd** (off); Lap 13: **Dumfries** (harness undone); Lap 15: **Leoni** (tangled); Lap 22: **Grand** (spun); Lap 23: **Nielsen** (oil pressure).

FINAL RESULTS

1. Thackwell (Ralt RC85) 29 laps or 196 km/122.5 miles in 1 hour 11m 56.51s, at an average speed of 167.852 kph/ 104.907 mph; 2. Ferté (March 85B) 1 hour 12m 06.55s; 3. Danner (March 85B) 1 hour 12m 55.11s; 4. Tarquini (March 85B) 1 hour 12m 57.51s; 5. Dacco (March 85B) 1 hour 13m 37.01s; 6. Fangio (Lola T950) 1 hour 13m 51.31s.

Fastest race lap: Thackwell in 2m 26.769s at an average speed of 170.226 kph/ 106.391 mph.

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SULLIVAN ASTOUNDS

THERE WAS NO STOPPING DANNY SULLIVAN AT THE INDIANAPOLIS OVAL THAT LAST WEEKEND IN MAY. NOT EVEN A SPECTACULAR SPIN AT OVER 185 MPH JUST AS HE WAS EDGING HIS WAY PAST RACE LEADER MARIO ANDRETTI TO TAKE CONTROL...

by Christian Courtel

Danny Sullivan returned to the States last year after a more or less successful attempt at becoming a racing star in Europe. He spent a season with the Tyrrell F1 team but he didn't obtain the fame and fortune he was so desperately seeking. The 34-year old from Kentucky has finally been rewarded, but the road to stardom was particularly treacherous.

Very early on in his career he emigrated to England and went into Formula Ford. That was in 1971. Next he was behind the wheel of a Formula 3 and then a Formula 2 without the kind of success he was really hankering after although he did notch up a F3 win in 1974 with Modus. His main problem stemmed from the fact that he was without a generous backer and had to make do with "second rate" drives. It got to a point when he seriously envisaged putting an end to his career in 1978! Once back in the States, he took part in the North American Formula Atlantic championship. Garvin Brown then entered Sullivan's life and from then on, his career took a turn for the better. Brown was able to provide his young friend with the necessary means to fight competitively. Sullivan finished 4th in the 1981 Canam series and was then hired on by the Forsythe brothers for the 1982 Formula Indy season. Despite some good results during the early part of the season, Danny's contract was not renewed as his employers were more interested in the Mexican Rebaque's "greenies" who at the time was desperately anxious to get into Formula 1. Sullivan, therefore, went back to Europe in 1983 and this time he really got a taste of what Formula 1 was all about. He didn't mind if it was a normally-aspirated Tyrrell, hell! he was in Formula 1! Unfortunately, despite his obvious skills, the American was again without a drive in 1984. So it was back yet again to the States where he was taken on by the Doug Shierson/ Domino's Pizza team for a whole season of the CART/Indy series.

Danny Sullivan was determined to make the most of the chance he was being offered: he was first home at Cleveland, Sanair and then more importantly at the Pocono oval after a memorable last-minute dice. He guided his Lola T800 to 3rd place in the championship. A new American motor racing star was born in the American firmament and Roger Penske was quick to sign him on to race alongside Rick Mears.

Indianapolis, together with the Le Mans 24 Hours, is the most famous race in the world. No other race requires a whole month of preparation. The show usually gets off the ground at the beginning of May with the traditional Rookie tests —those drivers that have never raced at the Indianapolis 500 Miles are put through a number of test runs at higher and higher speeds. This "exam" is compulsory for everyone racing for their first time there, no matter what their past results are. Even the likes of Jim Clark, Graham Hill or Jackie Stewart who were largely dominating Formula 1 had to take it! More recently, Emerson Fittipaldi, the double world constructors' champion had to take the rookie tests to prove he had the skills... followed by a medical check-up, again compulsory for all Indy competitors.

This year, the first non-qualifying tests began on May 4, and lasted a whole week before the official timed sessions on the week-end of May 11/12, during which three quarters of the grid positions were established. Another week of further untimed and timed tests took place for the not so fortunate drivers! The town of Indianapolis lives, breathes and talks of nothing but the 500 Miles

for a whole month. Traditionally the last week-end of May is reserved for the race.

Vast numbers of spectators turn up to follow both the non-qualifying and qualifying sessions — between 10 and 15,000 during the weekdays and between 75 and 80,000 for the week-end qualifying sessions. It should also be remembered that a total prize purse of £3.5 million was being offered this year. Pole position man Pancho Carter found himself richer by 55 "grand"!

The fight for first position on the grid was a tough affair for all the favourites. At 51, Dick Simon was the oldest and fastest during the first day of qualifying. He put in an impressive four laps at an average speed of 210 mph! Amazing when you think that last year's lap record man Tom Sneva qualified at an average speed of 211.868 mph. Despite reducing ground effect and lowering boost pressure, today's Indy cars are faster than ever and the specialists were already predicting that the 1985 pole would be at an average speed of about 216 mph!

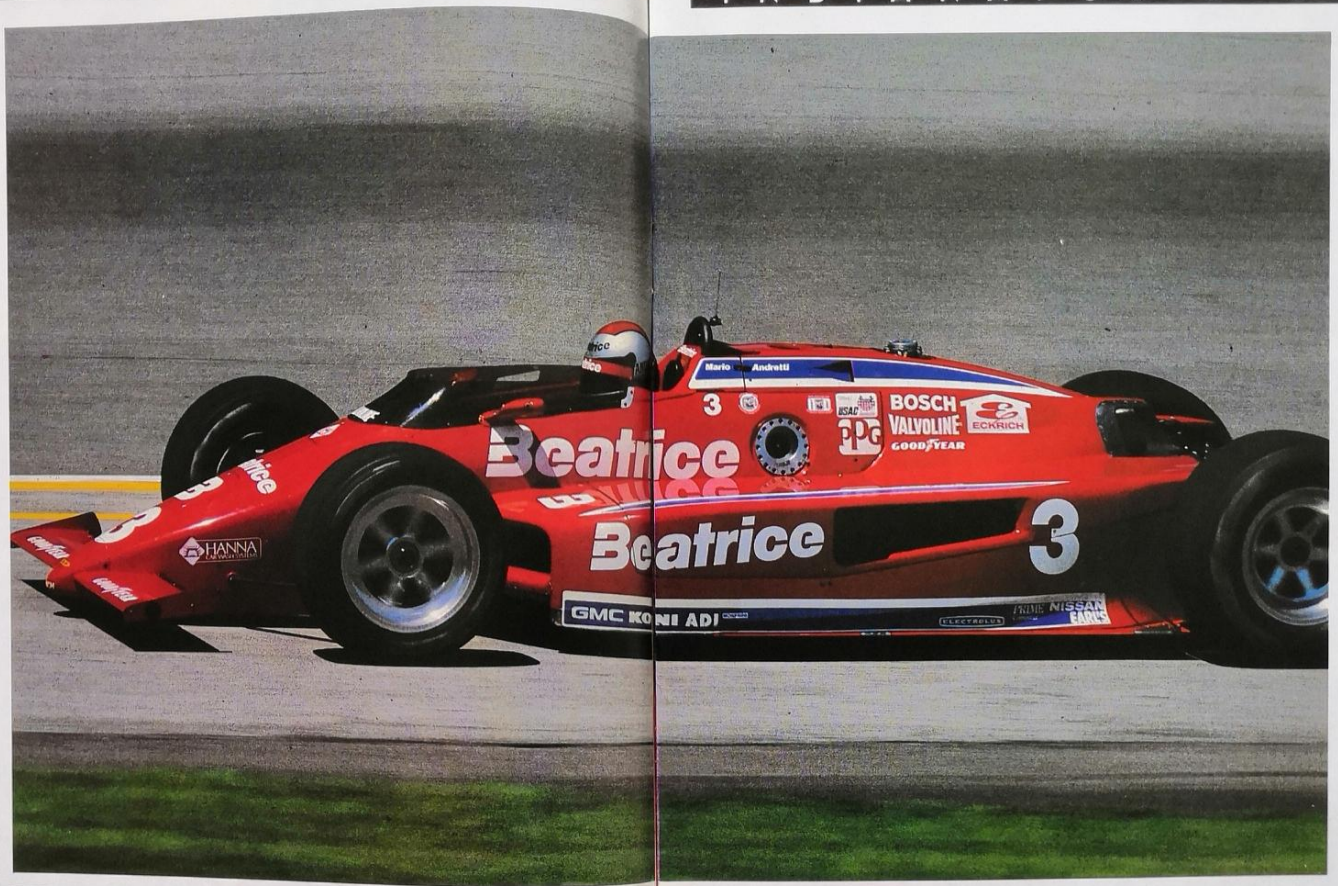
It wasn't long before Guerrero and Rick Mears — back to racing after an absence of 8 months — and Bobby Rahal smashed Snevas's record. On Friday May 10, the day preceding official qualifying, Mario Andretti did even better, putting in a mind boggling 216.812 mph.

But, as at every other circuit, untimed practice is not official and more was yet to come. A strong wind took care of upsetting the bookies' predictions for starting grid positions. Pancho Carter surprised all and sundry with an average lap speed of almost 214 mph, mainly due to the fact that he had a turbo Buick engine rather than a Ford Cosworth like most of the other competitors. To compensate for their handicap, authorised boost pressure is higher on Buick power units than for Cosworths. Usually this ruling does not favour one particular engine or another, but this time the air was extremely humid and strong winds were blowing.

Having a Buick sitting on pole is quite something, but the second Buick-engined driver Scott Brayton quickly hoisted himself up alongside Carter. Bobby Rahal was third and first of the Cosworths and his average speed was a fraction faster than Sneva's record from last year. And that completed the front line.

Behind, on the second line came Mario Andretti and the two Patrick Racing Marches driven by Fittipaldi and Don Whittington — called in to replace Gordon Johncock who'd taken the decision to retire in mid-season.

Three March Penskes were sitting behind with Al Unser Sr. Danny Sullivan and Rick Mears (the 1984 winner) at the wheel. Geoff Brabham had managed to squeeze his way in between them. AJ Foyt and J. Rutherford (6 wins between them) were somewhat surprisingly further back on the starting grid. Fastest of the rookies was Arie Luyendyck, but Raoul Boesel had actually put in the fastest average speed during the second week of qualifying. The cars on the starting grid were not varied, there being 24 March 85 Cs, 7 Lola T900s and 2 Eagle 85 GCs, and there were 30 Ford Cosworth DFX, 2 Buick and Chevrolet V6 engines running.



After the traditional, "*Gentlemen, start your engines!*", American actor James Garner led the field round in the pace car for the rolling start. An estimated 350,000 admission tickets had been sold and the spectators were cheering madly as the cars moved round the Indiana speedway in formation. Rahal darted into the lead followed by Mario Andretti, Brayton, Fittipaldi, Unser Sr, Carter, Sullivan and Brabham. Rick Mears had completely flunked his start and found himself stuck right in the thick of the mid-field runners. Pole man Pancho Carter was the first to retire when his oil pump went on lap 6. It wasn't long before Georger Snider's engine blew and the first yellow flags came out.

Once the neutralising period was over, Andretti snatched the lead ahead of Rahal and Brayton. Al Unser Sr bravely fought his way up to join the front runners, whilst the hapless Brayton was forced to retire with engine problems on lap 19, which meant there were no more Cosworths left in the race!

Mario Andretti was looking superb, just ahead of Al Unser Sr, Rahal, Fittipaldi, Al Unser Jr and Dick Whittington. Pop Unser was given a lap penalty when his wheels went over the track side line...

At the half-way stage, Mario Andretti was still in control. Bobby Rahal had dropped out with engine failure on lap 84 of the 200-lap race. Mario must certainly have been thinking he was going to get his second Indy success — his first was in 1969! But that was without reckoning on an earnest Sullivan, just behind Fittipaldi and Sneva. After the first round of fuel stops, Sullivan's March Miller was powering along in second position behind veteran Andretti. And reeling him in. On lap 120, Sullivan went for Andretti, but the old dog wasn't going to let himself be outdone without putting up a fight. He stuck to his line, forcing Sullivan to take the outside line in. Sullivan hadn't reckoned on the dirt and just as he was edging his way past, he spun off most spectacularly and did a full about turn. Miraculously he didn't touch either the wall or Andretti, and he didn't stall. The work of a miracle!

Sullivan made a pit stop for fresh tyres and when he rejoined the race, Andretti was well out of reach. Andretti, though, also made an unscheduled pit stop for fresh tyres to all four corners and lost the cushion he had on Sullivan. The pace cars were then brought out when Tom Sneva and John Paul Jr crashed which resulted in Sullivan catching Andretti. The younger of the two drivers was determined to take control and this time his gambit was successful. With twenty laps to go to the finish, he stayed out ahead until the end, thereby giving Roger Penske his fourth Indy win. Penske also won last year with Rick Mears. It was Sullivan's third Indianapolis 500 Miles participation and fourth CART victory for his 21st race in the American series. Although everyone was sure that Mario Andretti was going to win the 69th Indy 500, the man himself didn't appear too upset. He's never had much luck at Indy.

Roberto Guerrero was third home, a great result. Last year he was the focus of the media when he finished 2nd at his first attempt at the most prestigious American race. Al Unser crossed the line in 4th position despite his lap penalty, moving up as those in front dropped out; for Brabham, Whittington and Fittipaldi it was the engines that didn't last the distance and Rick Mears pulled out with gearbox problems. The hectic month of May is now over for the inhabitants of Indianapolis, roll on next year!

Mario Andretti (above) just missed winning yet again! Perhaps 1986 will be his lucky year?

Despite his lap-penalty, Al Unser (below) crossed the line in fourth position — one lap behind the winner!

STARTING GRID

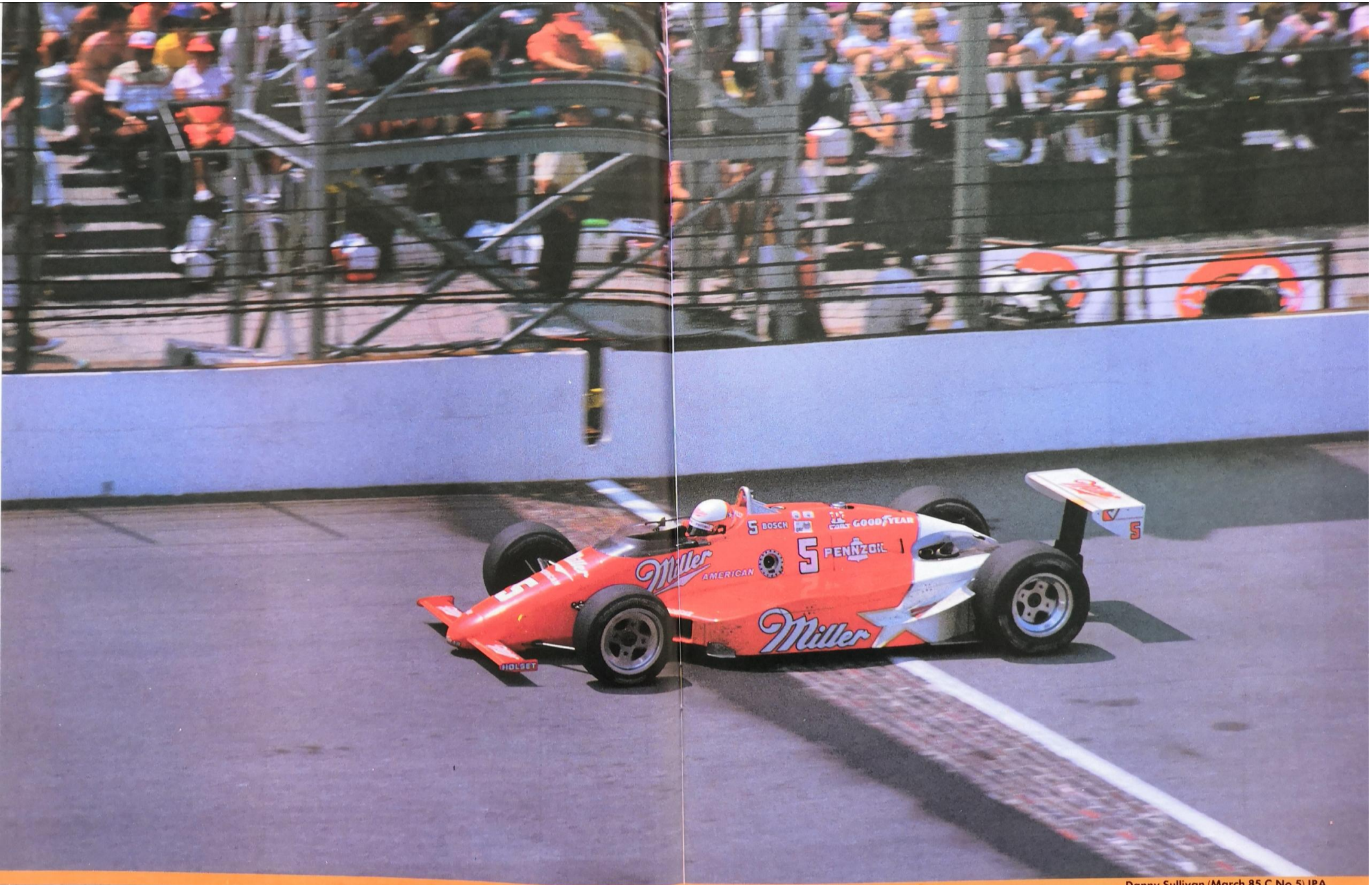
Pancho Carter March 85C/Buick 342.046 kph	Scott Brayton March 85C/Cosworth 342.677 kph	Bobby Rahal March 85C/Cosworth 340.815 kph
Mario Andretti Lola T900/Cosworth 340.425 kph	Emerson Fittipaldi March 25C/Cosworth 340.017 kph	Don Whittington March 85C/Cosworth 339.484 kph
Al Unser Sr March 85C/Cosworth 338.731 kph	Danny Sullivan March 85C/Cosworth 338.369 kph	Geoff Brabham March 85C/Cosworth 338.009 kph
Rick Mears March 85C/Cosworth 337.561 kph	Al Unser Jr. Lola T900/Cosworth 336.6262 kph	Bill Whittington March 85C/Cosworth 336.230 kph
Tom Sneva Eagle 85GC/Cosworth 336.163 kph	Dick Simon March 85C/Cosworth 335.534 kph	Michael Andretti March 85C/Cosworth 334.969 kph
Roberto Guerrero March 85C/Cosworth 334.771 kph	Danny Ongais March 85C/Cosworth 333.416 kph	Josele Garza March 85C/Cosworth 332.527 kph
Howdy Holmes Lola T900/Cosworth 332.052 kph	Arie Luyendyck Lola T900/Cosworth 331.052 kph	A.J. Foyt Jr. March 85C/Cosworth 331.103 kph
Ed Pimm Eagle 85GC/Cosworth 331.009 kph	Raoul Boesel March 85C/Cosworth 332.325 kph	John Paul Jr. March 85C/Cosworth 332.071 kph
Chip Ganassi March 85C/Cosworth 331.691 kph	Johnny Parsons Jr. March 85C/Cosworth 331.166 kph	Jim Crawford Lola T900/Cosworth 330.759 kph
George Snider March 85C/Chevy 330.646 kph	Tony Bettenhausen Lola T900/Cosworth 329.631 kph	Johnny Rutherford March 85C/Cosworth 335.151 kph
Derek Daly Lola T900/Cosworth 334.014 kph	Kevin Cogan March 85C/Cosworth 332.116 kph	Rich Vogler March 85C/Cosworth 330.965 kph
Substitutes Pete Halsmer March 85c/Cosworth 329.325 kph	Michael Roe Lola T900/Cosworth 329.121 kph	

INDIANAPOLIS 500 MILES

69th Indianapolis 500 Miles.
Date: May 26
Round two of the 1985 CART/PPG Indycar Championship
Race Distance: 500 miles or 804 km.
Starters: 33, **Finishers:** 12
Attendance: 350,000

FINAL RESULTS

1. Danny Sullivan (March 85C/Cosworth) 500 miles or 804 km in 3 hours 16m 06.0s, at an average speed of 246.14kph/153.83mph. 2. Mario Andretti (Lola T900 Cosworth) 3 hours 16m 09.5s. 3. Roberto Guerrero (March 85C/Cosworth) 3 hours 16m 17.6s. 4. Al Unser Sr (March 85C/Cosworth) 199 laps. 5. Parsons (March 85C/Cosworth) 198 laps. 6. Rutherford (March 85C/Cosworth) 198 laps. 7. Luyendyck (Lola T900/Cosworth) 198 laps. 8. Michael Andretti (March 85C/Cosworth) 196 laps. 9. Pimm (Eagle 85GC/Cosworth) 192 laps. 10. Holmes (Lola T900/Cosworth) 191 laps. 11. Cogan (March 85C/Cosworth) 191 laps. 12. Daly (Lola T900/Cosworth) 189 laps.



Danny Sullivan (March 85 C No 5) IPA

SULLIVAN, THE BRAVEST OF THEM ALL LAPPED THE INDY OVAL AT AN AVERAGE SPEED OF 153.8 MPH!

Arie Luyendyck (Lola T900 No 61) IPA

EST 1985 INDY ROOKIE, THE DUTCHMAN FLEW OFF FROM THE MID GRID TO FINISH BETWEEN RUTHERFORD AND ANDRETTI JR

AYRTON SENNA
COMING GOOD — FAST

THRUXTON, ON A COLD AND SHOWERY MAY MORNING. THE F3 CARS ARE PRACTISING FOR THE AFTERNOON'S BRITISH CHAMPIONSHIP RACE, IN THE PIT LANE, AMONG THE MECHANICS, STANDS A FAMILIAR-LOOKING FIGURE. CAN IT REALLY BE AYRTON SENNA, WINNER OF THE PORTUGUESE GP, STANDING BY TO POLISH THE VIZOR OF A MERE FORMULA 3 DRIVER?

by Mike Doodson

Indeed it is. Senna has come to Thruxton to be with his friend Mauricio Gugelmin, a front-runner in British F3 this year. And however inappropriate it may seem to the fans to have an F1 star here among the F3s, to Ayrton it's an enjoyable occasion. For one thing, it's only just over a year since he himself "graduated" from F3 with the West Surrey Racing team run by Dick Bennetts, the Kiwi engineer who is running Gugelmin's Ralt this season.

For another, he shares his little house on a new estate near Reading with Gugelmin and his wife Stella. *"They came to stay for a few days, and we found we liked the arrangement,"* explains Ayrton. *"We both used to race karts and we've known each other for a long time. You know how close Brazilians are..."*

There is a significance in the fact that Ayrton Senna shares his home with Mauricio and Stella. He himself is a man who is exceptionally close to his own family and who needs companionship. At the circuits, however, the impression you get from him is one of remoteness and utter single-mindedness, a loner who will not allow anything to deflect him from the one goal, the World Championship, which he has set for himself.

"Ayrton eats, sleeps, walks and talks motor racing," says Peter Warr, the JPS-Lotus Team Manager. *"He has other interests, like his water skiing, which he can't really exercise in England. He has a blinkered view, or tunnel vision, of the subject that he's involved with. I have to say that it gives him a heightened concentration: it helps this uncanny ability that he's got to be very concise about things."*

This conciseness, the ambition and the tunnel vision, all conspire together to make Ayrton admirable but not approachable. At races, particularly when there's a problem with the car, he seems to be living in a world where access doesn't include fans or journalists: it is limited only to those members of his team who can help him to sort it out. But there's a much more warm and human side to the man, like the sincere handshakes for every one of his mechanics when he's set pole position (as he did at three consecutive GPs earlier this year). When he and I spoke on the telephone on the day after he'd won the Portuguese GP by almost literally walking on the water, he genuinely wanted to know what I thought about his performance. *"You drove,"* I offered, *"like an angel."* I could almost feel the heat of the blushes coming down the phone line. *"Eff off,"* was his embarrassed response.

His 1985 season, in case anyone had forgotten, looked like starting badly. At the beginning of December last year, before he'd had a chance to do any test-driving for Lotus, he was struck down with Bell's Palsy, a form of paralysis which afflicted the right side of his face. The eye on that side wouldn't focus and for three months he was unable even to sit in a racing car. When he did get his hands on the precious new 97T, for the first of the two Rio tests, he knocked a wheel off it while disputing a corner with Nigel Mansell, whose car the Lotus would have been if his JPS place hadn't been taken by Ayrton.

Evidently the new car was capable of improvements, most of them carried out on suggestions from the experienced Elio de Angelis. The Italian qualified just ahead of his new team mate in Rio, and went on to finish 3rd. He had spent half the race watching Senna's sister car from behind until it was halted by an electrical problem. Surely, I asked, it is difficult to have good relations with a team mate under those circumstances?

"There's no problem between us. It's good relationship, I must say. He is there, he knows well how the team operates. I am still finding out in every test session, every race, how people work, how people think. He is leading the championship, so he should be happy with that, huh? And we have no problems. We work well together, we exchange information quite well. We have similar ways to think about our cars, so everything is working well, so far."

Unlike most young drivers, including several men who went on to become great champions, Senna has learned very quickly how to curb his anxiety to be in front of a race, acknowledging the risks implicit in trying too hard, too soon. There was no better demonstration of this than his second race for Lotus, at the drenched Estoril circuit near Lisbon in Portugal. But not many people knew how worried the Brazilian was on the race.

"I had no idea that the car would go so well in the wet, absolutely not. In the dry qualifying the car was definitely going well. But in the wet I had no idea, because we had not done any tests on a wet track anywhere, mind you, on the warming-up laps, when the organisers gave us (I think) ten minutes extra practice, I was absolutely lost in those conditions, because I had no idea how the car would behave on that track with so much water. And going from the dry to the wet with full tanks, I was so slow in those few laps, making sure that I wouldn't crash before I even started. I was thinking about the race, huh?

"When I came back to the pits, what with having a new gearbox, new engine, everything, I was unable to say if the engine had any boost or anything, because I hadn't dared to use any. Then when it came to the race and the green flag, I tried a lil' bit more. Then I felt the car was as good as normal to drive. So then it was OK for the race. But I only really found how the car was like at the green flag and in the first laps of the race."

It would be wrong to suggest that he was pussy-footing in the first laps at Estoril. The TV transmission clearly showed him locking a front wheel under braking on the first lap as he hung on to his lead and the blessed relief, denied to all others, of having a road ahead of him that was clear of spray.

But it's not all roses when the rain is coming down hard, leaving fresh puddles in places where they hadn't been on the previous lap. *"You don't know how quick you can go, because there is no reference to someone in front. It's the first guy to get to the new situation who finds out about it when something suddenly goes wrong with the conditions."*

At just before the halfway mark, in conditions that caused Alain Prost to spin off, Ayrton did something that Prost himself had done last year, at Monaco. He signalled race officials to call a halt.

"Well, the conditions were a lot worse than Monaco was, and I thought the race should have been stopped... Although I had such a big lead, and no troubles with my car at all, so I could have kept going — as we did eventually. My pure concern was just that the conditions were too hard, even if maybe they would apply only half points. I was in a position to push for full points, but the conditions were so bad that I was prepared for half points.

"Don't ask me about the bad moments I had, because there were several. The really bad one was when I went with all four wheels off the road. The car just hit a big puddle and went straight out of the track. Fortunately it didn't hit anything."

Two weeks later, at Imola, he looked set for a second win. The morning practice session had been damp, and certain changes made to the set-up of the car had made it undriveable under those conditions. For the race, like several other top teams. Lotus may have concentrated too hard on getting the chassis settings right — at the expense of checking fuel consumption. Ayrton insists that he had no advance warning that his Renault engine might run out as it did, three laps from the end, when he was leading.

"Our people thought it would be a hard race, but nothing like it turned out to be," he explains. *"The trouble was that because of the different weather conditions all through the weekend, we never had a chance of assessing the fuel consumption."*

The interesting aspect of the Imola race is that although Senna outdrove everyone until his fuel expired, he was exceptionally economical on his tyres and brakes. When checked afterwards, his brake pads still had half of their "meat" left, while Elio's were down to the backing plates. *"We see the same thing at most circuits,"* says Warr:

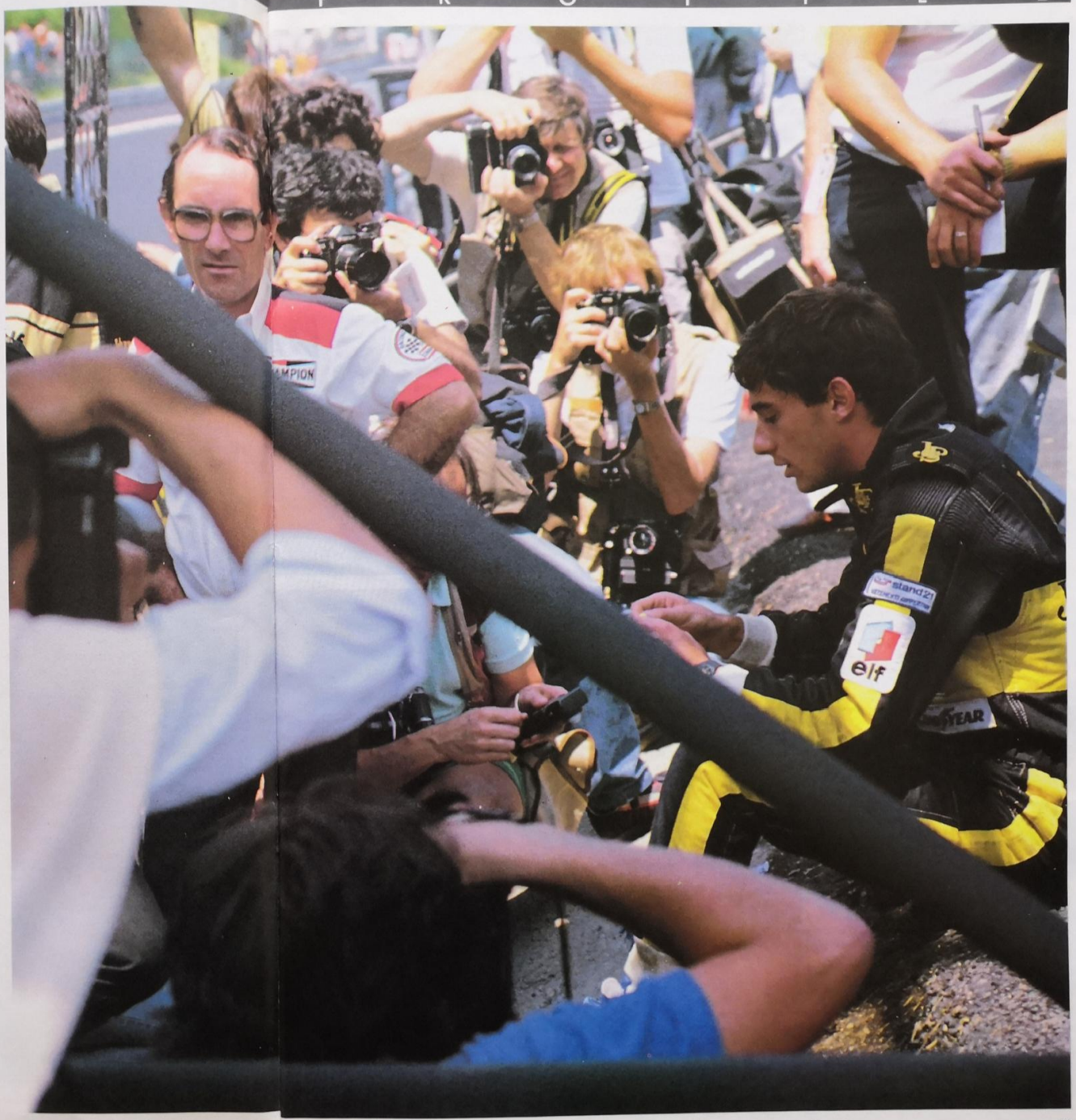
"Ayrton's brake wear is less. That doesn't mean to say that Elio's way of doing it is either slower, or wrong. I'm saying that the benefit of Ayrton's driving is that it's not so hard on the machinery. And that's gotta give him a better chance of getting results."

Ask Warr for more insight on Senna, and he'll deliver. After all, it was he who recruited the youngster last year not only from Toleman but had also snatched him from the grasp of teams like Williams and McLaren which had already shown their eagerness to have him by offering test drives and even contracts before he'd even finished in F3.

"There's no point on going into what a fast driver he is," says Warr, *"because everyone knows already how fast he is. I think what makes him particularly special are two features. One is that he can drive a race car very smoothly and not look as if he's hurrying. And just from experience of earlier people — the Clarks and Fittipaldis of this world — it was always the case that if they didn't look quick, they were quick. And what there is as a bonus is that he's easy on the brakes, he's easy on the tyres, he's really easy on the machinery for the incredible speeds he achieves.*

"The other thing is probably the most important one, and that is that he seems to be able to separate himself from the physical actions of driving the car, and allow his mind to work, as it were, independently. So that when he comes into the pits, or the de-brief meetings afterwards, he seems to have almost total re-call of what the car's doing —and in the minutest and most precise detail. Of course that's the most wonderful help to the team, because it enables us to identify the problems quickly, and it allows us to progress quickly as a result of what he says. For me, I think that is the most impressive thing about him."

It was in Monaco that Ayrton found out what the other drivers really thought about him. Peter Warr quotes Colin Chapman on the subject of up-and-coming drivers. *"When you've won one race,"* said Chapman, *"everybody is your friend. When you've won two, they're all out to shaft you."*



So it seemed in the Principality with Senna. On Thursday he had, yet again, been fastest in the official session, but in Saturday morning's unofficial session he had been bested by Alboreto's Ferrari. The ace up Lotus's sleeve had been a tyre tactic worked out during tests with Goodyear earlier in the week at Ricard. In order to squeeze more than one fast lap per set of tyres round Monaco's crowded streets, they settled on qualifiers on the front and soft race tyres at the rear.

Driving in a style which Gugelmin, watching at Casino Square, reckoned owed a lot to his friend's many years of racing karts without front brakes, Senna looked good for his third consecutive pole position when he "lost" his first chance as a result of Tambay spinning in front of him. Nevertheless, he set fastest time on his second "mixed" set of rubber. The worry was that there was still 20 minutes of the session left to run, and Alboreto — fastest-ever man round Monaco that morning — still had a second set of gumballs to use.

By the time that Alboreto was on the track with his one-lap "stickies", so too was Ayrton, using the best four tyres selected from the eight he'd already used. The Ferrari driver later complained that he'd been baulked by the number 12 Lotus. Niki Lauda also complained that he'd been blocked when he'd been trying to get the best out of his second set. Neither of them, it seems, knew about the Lotus tyre suberfuge, and the flak that was later to be hurled at Ayrton deeply offended Warr, as he explained to us.

"Ayrton was up for his third pole position at Monaco, so naturally he attracted the envy of other drivers who felt that perhaps they had a chance of achieving what he had achieved. But the fact of the matter is that practice is totally free: we don't have to ask anyone for advice as to what to do with our practice, or what policy to adopt during our practice.

"If we want to run full tanks, or bed brakes, or whatever, the track is open for us to do that. The reality of the situation at Monaco, for anyone who will study the Longines sheets which give details of every driver's time on every lap, is that Ayrton was actually first and second fastest at Monaco. And his second fastest lap was actually set on the 13th lap of a 15-lap of practice. Which is the time he was out with Alboreto. And if that doesn't speak for itself, I'm afraid I can't really help people to interpret it. If Alboreto was so desperately upset that Ayrton was trying to get the best out of his tyres, then he should have dropped back half a lap. Our drivers have to do that, very often."

To some people close to Lotus, it looked like wily instructions from Warr, with Senna in no position to disobey orders, even if he'd wanted to do so. Was it gamesmanship? When asked, Warr was cautious: *"Not really,"* he said, *"I mean, why should it be?"* Senna was more direct. Had he been instructed to go out in those closing laps by Warr, I asked? *"Eff off,"* he said, in much the same way as he had when I responded to his question about his driving at Estoril. Readers may draw their own conclusions.

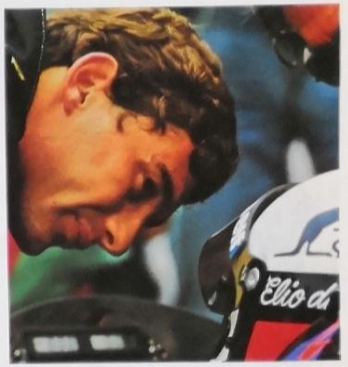
Engine wizard Brian Hart, himself once a fine F2 driver, was in no doubt that Ayrton needs to make no apologies. Brian worked with Senna at Toleman last year, so he should know. *"He just uses his head,"* opined Hart. *"He looks down pit lane and sees who's in and who's got the engine covers off. He works out when to do his quick lap. You don't have to believe all that stuff he puts out about being lucky with the traffic."*

Niki Lauda was less charitable. At Monaco he claimed that he deliberately moved over for the Lotus at Mirabeau on Senna's quick lap, only to be baulked himself by the Brazilian at the swimming pool section on his own quick lap. Eye witnesses of the two incidents suggested that perhaps Niki was exaggerating. When told about the tyre tricks, the World Champion relented somewhat. *"But what I don't understand,"* he said, *"is that he's the best upcoming guy in F1 today, he drives so well that he has no need for dirty tricks."*

Senna went directly into the lead and held it for a dozen laps at Monaco before his Renault EF15 engine blew up. There was to be no revenge for last year's defeat on the finishing line at the hands of Prost as the Frenchman prepared to abandon the battle. And Ayrton's hopes for a battle with Alboreto and de Angelis at Spa were frustrated by the crumbling track surface. After these words had gone to press, Ayrton faced the two difficult North American street circuits of Montreal and Detroit. He doesn't particularly enjoy stop-and-go circuits, and he has bad memories of narrowly escaping injury at Detroit last year after Nigel Mansell's startline accident. He looks forward to the fast circuits coming up: Ricard and of course Silverstone, where he set fastest time during the two days of testing immediately after the Spa fiasco.

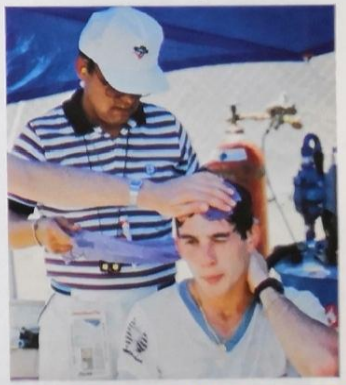
By the end of June, however, he must vacate the little house in Reading because the lease is due to expire. He has already found a new home, closer to London, which he will be buying freehold. He saw it, liked it and made an offer for it over a weekend. But after the Silverstone test he got a touch of the old Brazilian *saudade*, the homesickness which afflicts all Brazilians eventually. He flew back to Sao Paulo to be with his family.

His two Brazilian friends will be moving with him to the new house, of course. They make it possible for this amazingly talented Grand Prix newcomer to keep his feet on the ground, to maintain a sense of reality. He is sufficiently well-adjusted not to be carried away by the hype he's attracting. But he's sensible enough to know that it needs only one little slip to put a halt to the astonishing chain of events that have made Ayrton Senna a contender for the World Championship only one year after he joined the F1 family. ■



Senna and team mate Elio de Angelis swap information (top right). Formula One's new hero began his motor racing career in go-karts. (top left).

Will Senna be the man to scoop Lotus's eighth World Constructors' crown? (bottom left). 17-year old Senna — from Brazil to England (bottom right). Ayrton and manager Domingo Piedage (below).



SILENT GRAND PRIX

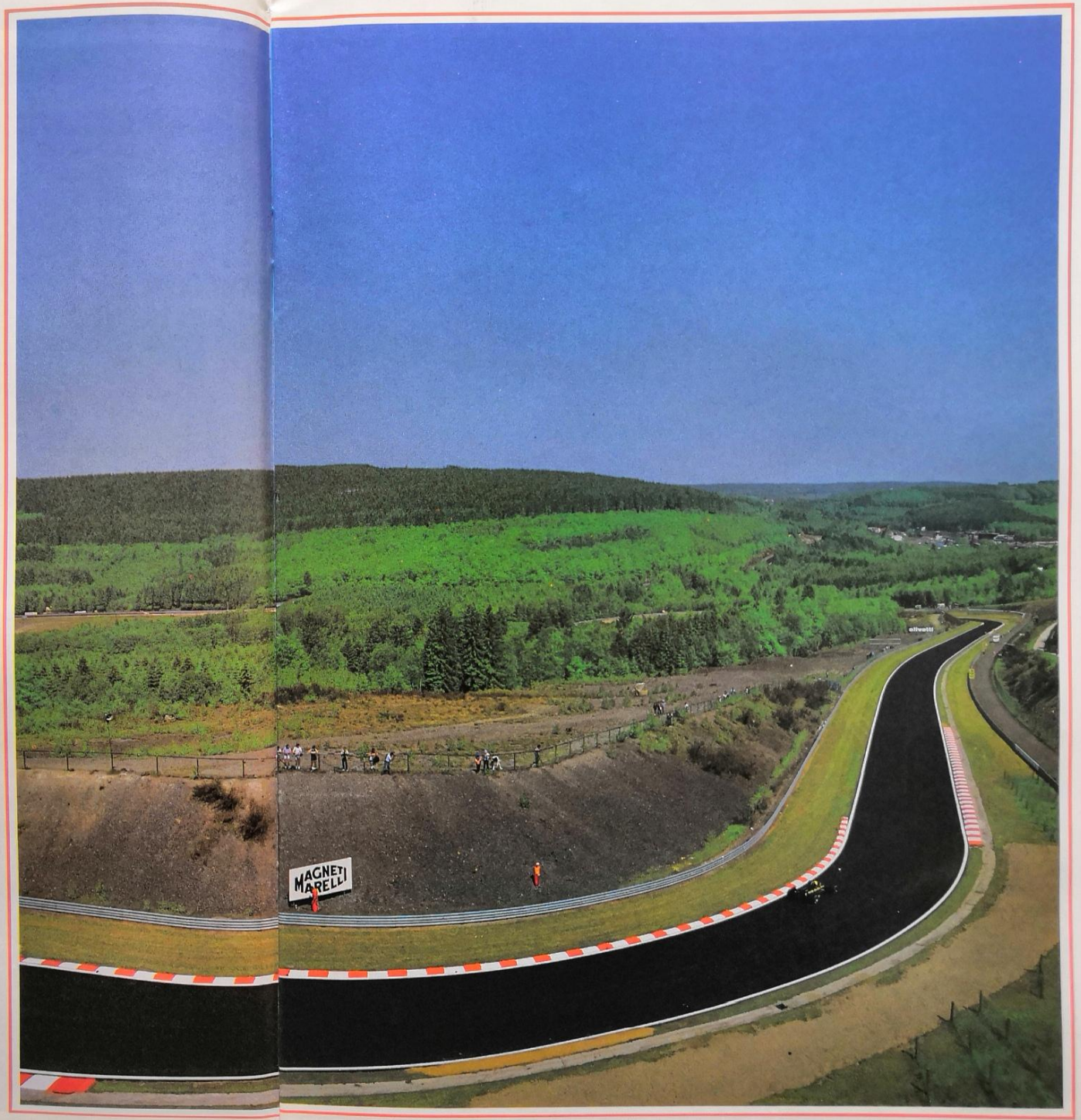
Why was the Belgian Grand Prix stopped and who was responsible? John Corsmit the FISA circuit inspector, who has been invested with the power to say whether or not a track meets the requirements to stage a F1 Grand Prix, went to Spa for a routine inspection a few months ago. The visa was granted without any problem. The organisers, though, wanted to make an even greater effort and on May 2, with only four weeks to go to the Grand Prix, undertook a complete face-lift of the Belgian track. The operation entailed re-surfacing of the entire length of the 6.945 km/4.318-mile circuit with a new product created by the Belgian company Hydrocar. The idea itself was a great one — even the Americans hadn't thought of it! In practice, however, it was not so great, mainly through lack of adequate preparation. Henri Mosson, the FISA technician admitted that, "*They hadn't in fact invented anything that extraordinary, as most North European military runways are covered with a similar product. But the runways are not used for about three months. During that time, water must be poured on it every day and the track has to be pounded regularly so that the different ingredients combine together.*" That was not the case. The first day of practice ruined the surface coating, cutting right through it and tearing it up at the breaking and acceleration areas. Lauda, naturally, led the drivers into an almost unanimous decision not to race. Only two would have liked the GP to take place as originally planned. Bernie Ecclestone's decision was most unexpected especially in view of the vast sums of money that had been invested, commitments to sponsors, employers, television companies and so on. Admittedly, he did keep putting off the ultimate decision, but in view of the circumstances it was the only one he could have made. After all, the drivers are the ones who risk their lives, not the organisers. Lauda and co know only too well what happens when a car slides off at 200 mph. Some team managers like Piccinini were also in agreement.

Once the decision had been announced on Saturday evening numerous questions came up. Why cancel the F1 race and not the F3000? Why wasn't the track repaired as soon as it began to deteriorate? Why had the drivers raced at Dallas and not at Spa where track conditions were very similar? Apart from the evident risks the drivers would be taking, no insurance would have been awarded had there been a serious crash for the simple reason that the FISA hadn't given a certificate of approval for the new track surface. There was not much point in comparing Dallas to Spa in that the American average lap speed was about 105 mph and in Belgium it was about 135 mph, not counting the concrete walls lining the trajectories into the fast turns...

For the F3000 boys, this was the opportunity to show themselves to the world. They would have all the spectators, all the press and TV coverage to themselves! Bargaining Bernie made sure he got himself a profitable deal before he left the Belgian track. He agreed to reimburse the television rights that various countries had been forced to pay in order to transmit the GP live, only if they used the scheduled time to broadcast the F3000 race.

We've rarely seen Bernie Ecclestone so eager to comply. One of the reasons which triggered off his decision was certainly the football tragedy which had taken place only a couple of days prior to the GP at the Haysel football stadium in Brussels. On the Saturday the cabinet leader of the Transport Ministry went to Spa. Had he come with an order from higher up? Accusing fingers will be pointing in various directions at the next executive committee meeting which has been convened on June 24 when the disciplinary commission bow their heads together. Will the circuit's licence be withdrawn? Will there be a heavy fine? Don't let's forget, ladies and gentlemen, that it was, after all, a FOCA GP.

The Belgian Grand Prix will, however, take place at the end of September, when hopefully the track will be suitably resurfaced. ■



CANADIAN GRAND PRIX

PRANCING HORSES!

IT ONLY TOOK ITALIAN DRIVER MICHELE ALBORETO FOURTEEN LAPS TO TAKE THE LEAD OF THE CANADIAN GRAND PRIX. ALL HIS RIVALS SAW OF HIM UNTIL THE FLAG WAS WAVED WERE HIS HEELS. STEFAN JOHANSSON NEEDED FIFTY LAPS BUT THEIR 1-2 TEAM PLACING DEMONSTRATES THAT FERRARI IS STILL VERY MUCH A LIVING LEGEND.

by Patrick Camus

TEAM BY TEAM

The cancellation of the Belgian Grand Prix meant that almost all teams were able to do private testing at Silverstone in preparation for the North American round.

MCLAREN

Bosch and TAG/Porsche had put in a lot of hard work to improve on engine output. The electronics appeared to be functioning well but higher boost pressure didn't produce as much extra power as expected. The oil company Shell had used a new type of fuel at Spa which had apparently brought about Prost's three engine failures.
Chassis - Lauda: MP4/2B-4; Prost: MP4/2B-5; T: MP4/2B-3.

TYRRELL

The end of the Cosworth era had almost dawned and Tyrrell had made no modifications to the good old normally-aspirated 012s.
Chassis - Bellof: 012/7; Brundle: 012/6; T: 012/5.

WILLIAMS

Williams went to Canada with a few new V6s first seen at Spa. Rosberg and Mansell alternated between the new and old versions. Honda aren't saying much about their engines except that a final version should appear later during the season. The stroke has been made longer, new pistons have been assembled and the valves have been modified to make the Japanese engine more flexible in a bid to improve on fuel economy. There was a new tub for the spare car.
Chassis - Rosberg: FW010/1; Mansell: FW010/2; T: FW010/4.

BRABHAM

Bernie Ecclestone's team had done a lot of changing of chassis. Piquet had a new BT54/6 to replace his chassis wrecked during his unfortunate encounter with Patrese at the Monaco Grand Prix. Marc Surer, called in to replace François Hesnault (since the Belgian round), was given the superb 54/3 which his predecessor had ben waiting for impatiently. Slight modifications had been made to the upper bodywork and two small extensions had been fitted *à la Lotus* to the end of the sidepods.
Chassis - Piquet: BT54/6; Surer: BT54/3; T: BT54/5.

RAM

John MacDonald had made no changes to his three 03s and his drivers were able to get in two whole days of private testing at Silverstone during which they were able to set their cars up to their own specifications.
Chassis - Winkelhock: RAM 03/3; Alliot: RAM 03/1; T: RAM 03/02.

RENAULT

Tambay had a new chassis the RE60/5 which was slightly more rigid and considerably lighter. The new gearbox case alone made the car 2 Kilos lighter on the scales. For Canada Warwick had an identical chassis apart from the tub.
Chassis - Tambay: RE60/05; Warwick: RE60/3; T: RE60/4.

ARROWS

Following the modifications that had been made since the beginning of the season —widened rear track at Monaco, widened front track at Spa — the Arrows engineers had worked on the engine/shell unit to make it more rigid.
Chassis - Boutsen: A8/4; Berger: A8/3: T: A8/1.

LIGIER

Andrea de Cesaris had a lighter race car to drive as a result of the modifications that had been made to the bodywork and the suspension unit. Laffite's car had also been lightened but his JS23 was conceding 6 kilos to his team mate's.
Chassis - De Cesaris: JS23/4; Laffite: JS23/1; T: JS23/3.

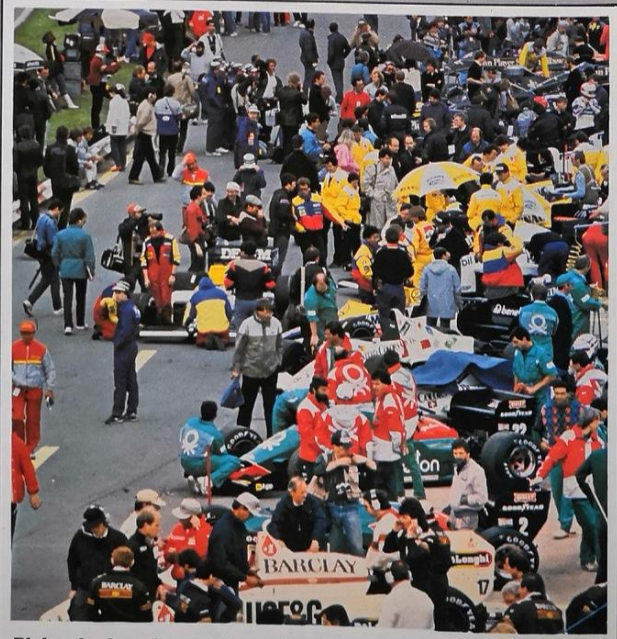
FERRARI

A new gearbox case had been assembled together with new rear suspension mounting points. Johansson was given a new chassis. A new Marelli mini onboard computer was present in replacement of the old one which was known to be inaccurate. It will be especially useful for the faster circuits.
Chassis - Johansson: 156/082; Alboreto: 156/081; T: 156/080.

MINARDI

There were two M185 chassis available as well as four Chiti engines for the North American round.
Chassis - Martini: M185/3; T: M185/2.

There was nothing new to report on the other teams' cars and we apologise for not including them in our Team By Team report. Renault decided to feature the new EF15 on its race cars and supplied similar engines to all its customers. A daring move in that the new V6 hadn't really achieved the kind of results expected. The reason to Renault's optimism was that the trouble had been traced to faulty segmentation. Zakspeed were not present at Montreal. They had decided to only compete in the European championship rounds. Meanwhile, they are working on completing a new chassis and a new electronic injection system as Bosch have refused to collaborate with the German team. Zakspeed will be present at the French GP.



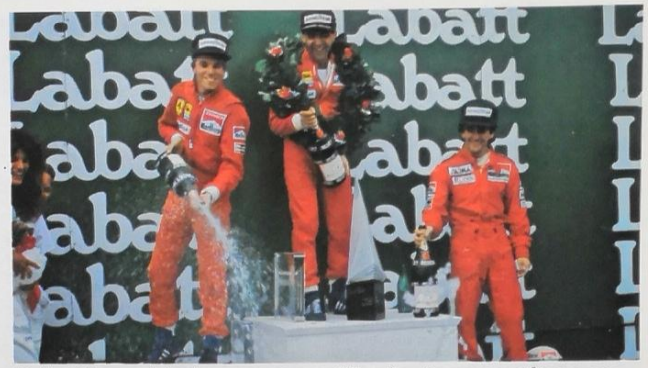
Blobs of colour down pit lane on the Ile de Notre Dame. Dig it!

ANALYSIS OF THE RACE

What an absolutely fantastic Canadian Grand Prix! Making the right tyre choice had been a crucial deciding factor but Alboreto and Johansson proved they had made the correct one and that they knew what fuel economy was all about. What did the drivers themselves have to say about their memorable 1-2 placing?
"An almost easy win," Alboreto said afterwards. *"I think I was getting more grip and that I was braking better than the Lotuses. I say it was almost easy because I had two problems. The first was to get past de Angelis. I knew that I could overtake him because I was faster but I had to wait until I got a good opportunity to do so and I had to wait for my tyres to warm up. Secondly, I had to take a completely crazy line to get past the debris left after Alliot's accident. I was worried about Cheever because of what happened at Monaco. To be honest, I wasn't too concerned about fuel consumption although we didn't have our onboard computers during the race."*
Stefan Johansson's path to the chequered flag wasn't as smooth as his team mate's because of an erratic engine. *"It didn't pull cleanly when I pushed the throttle pedal down. It was misfiring but that didn't stop me from reeling in Alboreto."*

JOHANSSON — "I COULD HAVE GOT BY MICHELE WHENEVER I WANTED TO"

What exactly happened when the Swede moved up into 2nd position on lap 51 and began to chase his team mate? He closed in steadily narrowing the gap from 6.03s to 1.75s on lap 58. It appeared that the two red cars were vying with each other for the lead for a good four laps. Had the Ferrari drivers received instructions from their team manager for a situation of this kind? *"I could have got by whenever I wanted to,"* came Johansson's cheeky reply. *"No-one had told me to stay behind Alboreto. I was never shown any instructions from the pits to slow down. Just as I caught Michele, he quickened the pace and I felt discouraged from trying to do anything more!"*
The Italian's version differed somewhat from the Swede's account. *"The only reason Stefan caught me was that I had eased off to save on fuel. It was only a precaution. He caught on very quickly, let me assure you."*
At the end of the race there were 10 litres of fuel in Alboreto's fuel tank and 8 in Johansson's. They needn't have worried. An exceptional performance in light of the difficult nature of the race itself.
There remains one important point, though. De Angelis had 10 litres left in his Lotus tank and Tambay 18. If these two drivers hadn't been held up by other problems they would certainly have changed the final results. Elio complained that his engine was down on power as soon as he tried to push it to its maximum. The decrease in power coincided exactly with the moment his tyres started to show signs of excessive wear following his repeated attacks on Alboreto whose rear right tyre was harder. Senna didn't have the gods on his side. He spent eight long minutes in the pits whilst the Lotus mechanics refastened his turbo. Should he really have been asked to rejoin the race, five laps behind the leaders? *"With a Grand Prix of the kind,"* team manager Peter Warr explained, *"there's always the possibility of finishing well or even in the points. Unfortunately, that wasn't the case."*
Frenchman Alain Prost had an unusually quiet race. It did look as though he was sparing his engine or his fuel. He wasn't. He quickened his pace to catch Johansson in the Ferrari and it was obvious that he could easily have got past the Swede to finish second. But, the plucky Frenchman had left it too late this time and he would almost certainly have run out of fuel before the finish line. Yes, the McLarens do have their failings! *"A shitty GP,"* said Alain. *"Nothing really bad or good. I was playing careful from the start but I should have tried to get past Johansson earlier. I only had two litres of fuel left in my tank at the finish. I'd rather forget about all that now."*
Prost really was latched on to the Ferrari's gearbox at the hairpin braking area and suddenly, for no apparent reason he let go. He pulled up straight after he'd got past the chequered flag although his fuel tank wasn't completely dry. He couldn't have been worrying about his car being underweight — it weighed in at a "hefty" 549 kilos!
The reigning World Champion Niki Lauda hadn't been looking too happy since he'd set foot on North American soil. He retired because of a leak in the water cooling circuit. Perhaps his McLaren's radiator had been punctured by a piece of Alliot's debris lying on the track?
Britain's Derek Warwick had asked for a very hard tyre to be fitted to his rear left wheel. He spun off with no damage to his car early on and then more dramatically a second time. He clanged hard into the guard rails giving his left wheel rims a sizeable thump in the process as well as buckling the rear suspension. Patrick Tambay from France was on his way to a good placing. He was powering along in 4th position on lap 46, only 17.44s off the leader and 8s behind Johansson. Without any warning 4th gear went. *"A real shame,"* he sighed. *"I'm sure that I could have finished 3rd. The chassis was great, the engine couldn't have been better, not quite as good as the Ferrari, granted, but good enough!"*



Stefan Johansson's first appearance on a GP podium in company of team mate and winner Alboreto and McLaren man Prost.

ALBORETO — "I WAS WORRIED ABOUT CHEEVER BECAUSE OF MONACO"

Frank Williams must have felt proud of his drivers. Keke Rosberg made two pit stops but held on hard to 4th position to finish less than half a minute behind race winner Alboreto. A fighter if ever there was one that Finn! *"I was concentrating so hard on my driving that I can't really say if everything was going as well as it should have been. I think so... Yeah, now I remember my first problem came when Warwick went off. I thought he was going to drag me out with him."*
It looks as though the British team have found an engine that is both powerful and not too greedy with the fuel.
Ligier driver de Cesaris spun off the track. Just as the Italian was on his way back onto the track Winkelhock arrived on the scene, completely unaware of what had happened. There was no way he could avoid hitting the blue car. Andrea was lucky in that he could continue although he had to pull up with brake problems but for Manfred he was forced to retire. Jacques Laffite was given a one-minute penalty for having anticipated the start but he finished 8th all the same and took the prize for first Pirelli boy home!

QUALIFYING

Friday: The cold weather was a determinative factor during the first day of qualifying for the Canadian Grand Prix. There was also a great deal of dust and dirt out on the track which is always to be expected on a non-permanent circuit. That and the cold (11° C) coupled with a fine drizzle had de Cesaris, Tambay and Warwick spinning off as the tyres took a long time reaching their ideal working temperatures. Johansson and Boutsen both tangled and de Angelis fell off the track. Not a particularly good omen at the start of a Grand Prix weekend.

Conditions during the last few minutes of the first untimed practice session did not improve as everyone tried to put in a good time on quallies in preparation for the timed session. Normally, they should have been able to improve on their times by three seconds, but no-one managed to. Prost and Alliot were the most satisfied. For the RAM driver it was the first time he had got through a practice session without experiencing any problems and the McLaren driver put in the fastest time at the wheel of the TAG-engined spare car

MARTINI — "I WAS ALMOST FLAT OUT WHEN I SUDDENLY FELT THE REAR TRACK COLLAPSE"

At 1pm it was time for the drivers to choose their qualifying tyres and get them OKed by the marshals. For many it was a difficult moment. Stefan Johansson chose one set of hard racing tyres and a set of soft rubber. For Lotus driver de Angelis, it was two sets of ultra-soft qualifying rubber, team mate Senna opted for one set of soft race tyres and a set of quallies just like Alboreto, Tambay, Laffite and Prost. The result was pandemonium throughout the first 60-minute timed session. Those on hard tyres stayed out on the track as they put in one lap after another with their softer-shod friends trying to get past. There was so much traffic that no-one managed to get in a single free lap. To make matters worse the red flag was waved twice. Firstly Martini's Minardi had to be removed following a particularly spectacular off. The young Italian was fortunately unharmed and later explained what happened, *"I was almost flat out down the straight leading into the hairpin when I suddenly felt the rear track collapse. I was doing about 260 kph and the car went hurtling backwards straight into the guard rails 200 metres behind me. The wheels were torn off and the suspension buckled under the impact."* Just at that point, flames were coming out of Cheever's Alfa when a turbo blew. Once the pick-up trucks had removed the two cars the practice session resumed its course for all of ten minutes. Eddie went out again in the spare car and another turbo went with the same result as before. He couldn't even go out in Patrese's car as the rear end of the Italian's Alfa was black as his turbo had also blown causing another fire.

The Williams team had a spate of engine failures on their Honda V6s. The drivers broke two new units and two of the previous ones.

Those drivers that had opted to go out on hard tyres had put in the fastest times. Alboreto put in the first provisional pole position time on Bs which can usually last a good half a GP. He broke Piquet's pole time from last year by three tenths of a second. *"Last year,"* the Italian said, *"my Ferrari was much harder to drive on this circuit. This time I felt as though I was at the wheel of a Rolls Royce!"* A statement that must have made the Commendatore happy. Alain Prost was third fastest having asked for hard tyres on his McLaren. Arrows man Boutsen explained that *"The temperature of the track surface itself is so low that if you fit soft tyres to the front wheels they simply don't warm up. After a good five laps you can feel that the grip's coming but by that time the rear tyres are worn causing the rear to understeer and then become uncontrolable."*

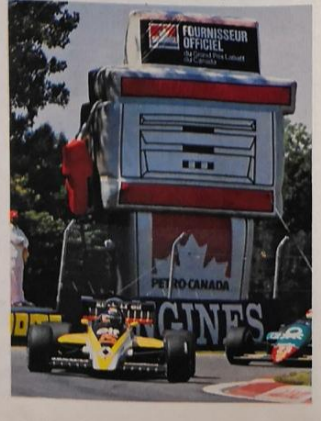
De Angelis had similar problems whereas his Brazilian team mate Senna put in the second fastest time on qualifying rubber. He, though, was already thinking ahead, *"They've predicted warm sunny conditions for tomorrow so it's not worth worrying too much today."*

Senna's weathermen were right — Saturday's sky was blue. Ferrari driver Alboreto said, *"The times are going to be faster today and we're going to be able to work on fuel economy."* With all the tyre problems of the previous day, no-one had given any thought to fuel consumption figures. On Saturday, however, a good eighty minutes of the ninety-minute session was spent calculating exactly how much fuel the various engines were using to avoid a repeat-performance of the Imola fiasco. Each car had 220 litres of fuel for approximately 300 km enabling the drivers to use a maximum of 73 litres of fuel per 100km, therefore 3.22 litres per lap — depending on the turbo boost pressure setting and the pace of the race. It would therefore be up to each driver to find a suitable compromise and not worry about anyone else. Just what a racing driver likes. Most engineers had fitted their drivers' cars with onboard computers so that they would know exactly how much fuel was left in the tank, how much they were using at a precise moment, average fuel consumption per lap, how many laps were left, how much they could turn up the boost pressure knob and so on. These computers are not always accurate. For example, on the closing lap at Imola Boutsen's computer informed him that he had enough fuel to cover three more laps whereas he ran completely dry within yards of the chequered flag. On the other hand Prost set his computer to enable him to finsh the GP, and this he did with only one litre of the precious liquid left in his tank. Marelli have just completed a device for Ferrari which was being used for the first time at Montreal. Rumours were going round to the effect it wasn't worth having an onboard being a good 4% or ten litres out, the equivalent of three laps. At present McLaren are the only team to have a reliable and trustworthy computer. The Renault drivers are still waiting for a Renix/Renault device to be completed and both they and the Lotus pair go by the fuel consumption calculations worked out during practice. Tambay had worked out his own guide lines, *"I think we'll be using more fuel here than at Imola. It'll be preferable to wait before attacking. I'm going to follow Prost and Lauda, they'll know what pace to adopt."* Bernard Dudot the Renault engines man commented, *"Montreal is definitely going to be hard, but not as hard as Imola. Here all our clients will be featuring the EF15 unit which uses between 4 and 5% less fuel than the EF4b."*

All black on the first line, all red on the second. Lotus took charge of qualifying and Ferrari of the race.

Prost (McLaren No 2) made a heroic charge up the field during the closing laps to combat the Ferraris but he left it too late.

A petrol pump attendant watches Tambay (Renault No 16) and Riccardo Patrese (Alfa No 23) streak past.



SENNA — "ELIO USED HIS TYRES BETTER THAN I DID"

Frank Williams announced that his new V6s were also 4 to 5% less greedy than his former Honda engines. It wasn't enough, though, and the Japanese engineers advised lower boost pressure. What about the real meaning behind the word 'race'? Triple World Champion title holder Jackie Stewart asked drivers how many gear changes they made per lap: Prost 24, Alboreto, Johansson, Piquet and Rosberg 31, and 34 for Senna. Despite it being warmer than on Friday there was still not much grip out on the track. The ideal tyre choice was soft tyres to the front which were warmed by fitting hard tyres to the rear for a few laps and then quickly changing them for a second softer set. Thus shod, the two Lotus drivers put in the fastest times. This time Senna wasn't quickest, but de Angelis. *"Elio made better use of his tyres than I did,"* the Brazilian explained. *"This pole position,"* Elio said, *"proves that it's no fluke that I'm provisionally leading the World Championship. When everything's going right, I too, can be quick."* For others, it was an entirely different kettle of fish.

Just as Prost was about to go out for a fast lap his TAG engine blew. Alliot had gear selection problems, Rosberg had engine failure. Fabi's turbo blew. Alboreto and Mansell both had fires break out when their respective turbos also blew. Damage to the Ferrari was so bad that it had to be replaced by the spare car for the race. Piquet had a hair-raising moment when the rear right suspension unit snapped, sending him off the track most impressively. ■

THE RACE

The sun was making a feeble attempt to shine through the thin uniform layer of clouds. Was the light breeze going to bring rain or shine for the afternoon? Tyre choice was again a tricky business and during the thirty-minute warm-up session the drivers and engineers tried out every possible type of combination their respective rubber suppliers had available. Quite a number of interesting variations were thus obtained. De Angelis, Senna and Johansson opted for Bs (soft race tyres) to the front, an A (hard race rubber) to the rear right wheel and a very hard AA to the rear left wheel. The two McLaren drivers, Lauda and Prost, together with Alboreto decided to race with three Bs and an A to the rear left corner, Tambay asked for As to all four, team mate Warwick chose three As and an AA to the rear left. There was less variation amongst the Pirelli clan. They opted for soft race 3 rubber to all four wheels. In the Lotus pits, there was a problem of an entirely different nature to contend with simultaneously. Senna's engine was down on power. The mechanics assembled a new engine for the start. With regards to fuel economy, it was deemed a wise precaution to top all the cars up to the brim to ensure that the cars finished the 309-km race — 311 km counting the grid formation lap... 1pm local time. And they were off with de Angelis getting away perfectly from his pole position slot before his team mate could beat him to it, despite his own excellent start. As the pack jostled for position behind the two black cars Alboreto, Warwick and Johansson emerged close on their heels, whilst Prost and Boutsen weren't looking too good. Fortunately there was no wheel banging or tangling and the Canadian Grand Prix was off to a trouble-free start.

10 LAPS

De Angelis 15m 14.999s; Alboreto 15m 18.906s; Johansson 15m 23.893s; Tambay 15m 27.313s; Prost 15m 28. 428s; Cheever 15m 37.065s; Mansell 15m 38.903s; Boutsen 15m 42.258s; Patrese 15m 45.649s; Warwick 15m 46.701s; Lauda 15m 47.428s; Berger 15m 59.462s; Laffite 16m 00.524s; Bellof 16m 05.009s; Rosberg 16m 05.371s; Surer 16m 05.849s; Brundle 16m 09.564s; Alliot 16m 14.879s; Ghinzani 16m 19.298s; Martini 16m 33.097s; De Cesaris 9 laps.

Toleman driver Fabi was very unlucky in that on his way to the final grid he fell victim of a fuel leak and rejoined the pits where the mechanics hurriedly got the Benetton-sponsored spare car ready for the Italian. He was forced to start the race from the pits lane as a result but didn't manage to get the Hart engine started until lap 3 of the race. Fabi was even more unfortunate in that once his engine finally got going his turbo pressure dropped and he had to retire. But, he wasn't alone. Piquet had also been let down by the Brabham's mechanicals and hadn't even completed a single lap. The Brazilian's gearbox was without anything above 2nd gear.

20 LAPS

Alboreto 30m 24.993s; De Angelis 30m 26.861s; Johansson 30m 31.683s; Tambay 30m 34.384s; Prost 30m 37.420s; Cheever 30m 54.140s; Mansell 30m 54.460s; Lauda 31m 09.444s; Boutsen 31m 09.685s; Patrese 31m 11.467s; Warwick 31m 13.110s; Rosberg 31m 13.697s; Laffite 31m 26.818s; Berger 31m 32.679s; Surer 31m 1.698s; Bellof 31m 49.471s; Brundle 31m 52.146s; De Cesaris 19 laps; Ghinzani 19 laps; Martini 19 laps; Alliot 19 laps.

Meanwhile, the two Lotus drivers had powered away with the lead, extending quite a bit of daylight between themselves and their immediate pursuers, de Angelis ever so slightly ahead of Senna. At the end of lap 2 they were 4.57s ahead of Alboreto and 7.49s ahead of Warwick. The Britisher had made an excellent start but soon appeared to be in trouble almost certainly because of his hard tyres. He spun on lap 4 and dropped back from 4th to 12th position. Trouble reared its ugly head on lap 6. Senna made what seemed to be an interminably long pit stop — 8m. His left turbo collar had split open. He received orders to go back out and rejoin the race, five laps behind the others. De Cesaris was also in big trouble on that same 6th lap. He got his blue Ligier into a spin and just as he was getting himself out of a particularly dangerous position, he succeeded in spinning again just as Winkelhock was coming up. There was no way the German could avoid ramming the Ligier. Damage was slight for the Italian who limped back to the pits for minor repairs to his car but for Winkelhock it spelt the end of the Montreal GP.

30 LAPS

Alboreto 45m 32.000s; De Angelis 45m 33.214s; Johansson 45m 40.454s; Tambay 45m 43.146s; Prost 45m 49.070s; Mansel 46m 08.767s; Cheever 46m 10.037s; Lauda 46m 20.688s; Boutsen 46m 34.531s; Patrese 46m 35.890s; Rosberg 46m 53.903s; Laffite 46m 54.349s; Berger 29 laps; Surer 29 laps; De Cesaris 29 laps; Bellof 29 laps; Brundle 29 laps; Ghinzani 29 laps; Alliot 27 laps.

De Angelis was still firmly in control of proceedings and with his team mate now five laps behind, his immediate threat was Alboreto in the Ferrari who was slowly reeling in the black car. The gap narrowed from 5.51s on lap 7 to 4.57s on lap 9, 2.61s on lap 11 and then to 0.93s on lap 13. It was obvious that the Ferrari would make quick work of getting past the Lotus. The Italian first probed for a way past going into the chicane and then made a thrust at the hairpin braking area to run away with the lead. Elio was not going to let his fellow countryman off lightly and hounded him for the next 17 laps, audaciously trying to get past whenever the opportunity arose, but all in vain. It was finally the tyres that prevented him from grabbing back the lead and Alboreto inexorably built up a solid cushion. Next, the Lotus fell into the claws of Johansson in the second Ferrari but the battle was fiercer. De Angelis and the Swede went into the hairpin together, their wheels touching as they fought for position. By some miracle both drivers came through unscathed, the Italian still ahead. On lap 51 Johansson repeated the manoeuvre and took 2nd position. The two red cars bearing the insignia of the prancing horse galloped off towards a 1-2 final placing, there being no-one near enough to push them into hurrying the pace and into running out of fuel.

The Williams-Honda seems to suit Nigel Mansell down to the ground. He's been in the points three times in five GPs (bottom right).

De Angelis (Lotus No 11) fended off Johansson (Ferrari No 28) from taking his second place as long as he could. The Italian finished 5th (below).

Testing was hot for Alfa — three charred rear ends before the Race

Keke Rosberg (Williams No 6) pitstopped twice but still crossed the line in 4th position

40 LAPS

Alboreto 1 hour 00m 30.997s; De Angelis 1 hour 00m 31.493s; Johansson 1 hour 00m 41.851s; Tambay 1 hour 00m 51.810s; Prost 1 hour 00m 58.318s; Mansell 1 hour 00m 58.878s; Cheever 1 hour 01m 40.396s; Rosberg 1 hour 01m 53.049s; Boutsen 39 laps; Patrese 39 laps; Laffite 39 laps; De Cesaris 39 laps; Berger 39 laps; Surer 39 laps; Bellof 39 laps; Brundle 39 laps; Lauda 37 laps.

De Angelis, meanwhile, was dropping back further and further. It only took Prost 8 laps to make up ground on what had previously seemed an enormous gap. The Frenchman was on the Lotus driver's gearbox on lap 61 and he then pounced on lap 62. Alain had been treading fairly cautiously up until that point, clinging to 5th position as he was unable to gain ground on Tambay, the Renault being faster down the straights. He finally got past the Régie driver

50 LAPS

Alboreto 1 hour 15m 35.958s; De Angelis 1 hour 15m 44.591s; Johansson 1 hour 15m 45.021s; Prost 1 hour 16m 06.516s; Tambay 1 hour 16m 12.518s; Mansel 1 hour 16m 35.678s; Rosberg 1 hour 16m 45.396s; Cheever 49 laps; Laffite 49 laps; Boutsen 49 laps; Patrese 49 laps; De Cesaris 49 laps; Berger 49 laps; Surer 48 laps; Bellof 48 laps; Brundle 48 laps; Senna 45 laps.

when the gearbox started playing up on the yellow car. Prost was conceding 13.75s to the leader and 12s to Johansson and the spectators had the prospect of an exciting end to the GP. The gritty Frenchman got down to business and began hauling in the Swede's red car 9.56s ahead of him. The gap narrowed to 5.1s on lap 67 and by lap 68 Johansson was no more than a mere second ahead of the red and white McLaren. Prost was right under the Ferrari's gearbox on lap 69 and it looked as though Johansson's time had surely come. Just as suddenly, Prost eased up on the throttle. Rather than risk sticking his neck out too far and repeating his unfortunate performance at San Marino, the Frenchman let Johansson go to make it a 1-2 for Ferrari.

LAP BY LAP

F1: CANADIAN GP

GRID POS.	11 1	12 2	27 3	28 4	2 5	16 6	18 7	6 8	7 9	15 10	23 11	17 12	22 13	9 14	25 15	5 16	1 17	19 18	26 19	8 20	10 21	24 22	4 23	3 24	29 25
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64	27	28	2	11	6	5	15	26	18	22	25	4	3	17	8	12	23								
65	27	28	2	11	6	5	15	26	18	22	25	4	3	17	8	12									
66	27	28	2	11	6	5	15	26	18	22	4	3	25	17	8										
67	27	28	2	11	6	5	15	26	18	22	4	3	17	25	8										
68	27	28	2	6	11	5	26	15	18	22	4	3													
69	27	28	2	6	11	5	26	15																	
70	27	28	2	6	11	5																			

- Starting grid position
- On leader's lap
- 1 lap or more behind leader
- Pitstop
- Retired in the pits
- Retired on the track

PITSTOPS

Lap 1: **Fabi**, check engine.
Lap 6: **Senna**, fastened turbo.
Lap 8: **de Cesaris**, changed front moustaches.
Alliot, repairs to front cover.
Rosberg, checked turbo pressure.
Lap 22: **Rosberg**, fresh tyres.
Lap 25: **Martini**, fresh tyres and spark plugs.
Lap 64: **Cheever**, changed injection box.

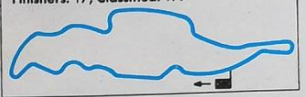
RETIREMENTS

Lap 1: **Piquet**, gearbox.
Lap 3: **Fabi**, turbo pressure.
Lap 6: **Winkelhock**, tangled with de Cesaris.
Lap 26: **Warwick**, off.
Lap 29: **Alliot**, off.
Lap 36: **Ghinzani**, fuel feed.
Lap 38: **Lauda**, engine temperature.
Lap 58: **Martini**, ignition.

STATISTICS

CANADIAN GRAND PRIX

Round five of the 1985 World Championship.
Date: June 16, 1985.
Circuit: Gilles Villeneuve, Montreal.
Track Length: 4.41 km/2.75 miles.
Race Distance: 70 laps or 308.7 km/192.9 miles
Weather: Cloudy and mild.
Attendance: 50,000.
Qualifying: 25; **Qualified:** 25; **Starters:** 25; **Finishers:** 17; **Classified:** 17.



FOR THE RECORD

Modifications to upper bodywork on the Brabhams • New chassis for Piquet (BT54/6) • New chassis for Tambay (RE60/5), both lighter and more rigid. New gearbox case (2 kilos lighter) • Laffite's Ligier JS25 was lighter on the scales • New gearbox case on the Ferraris and modification to rear suspension mounting points. New chassis for Johansson (156/082). Onboard computer for Scuderia cars • New chassis for Martini, the Minardi 185/3 • Six Renault EF15 engines available for the first time; two for Renault, two for Lotus and two for Ligier •

DRIVERS' WORLD CHAMPIONSHIP POINTS

(After Brazil, Portugal, San Marino, Monaco and Canada.)

1. Alboreto	6	+6	+0	+6	+9	=	**27**
2. De Angelis	4	+3	+9	+4	+2	=	22
Prost	9	+0	+0	+9	+4	=	22
4. Tambay	2	+4	+4	+0	+0	=	10
5. Senna	0	+9	+0	+0	+0	=	9
6. Johansson	0	+0	+1	+0	+6	=	7
7. Boutsen	0	+0	+6	+0	+0	=	6
8. Mansell	0	+2	+2	+0	+1	=	5
9. Arnoux	3	+0	—	—	—	=	3
De Cesaris	0	+0	+0	+3	+0	=	3
Lauda	0	+0	+3	+0	+0	=	3
13. Laffite	1	+0	+0	+1	+0	=	2
Warwick	0	+0	+0	+2	+0	=	2
15. Bellof	—	+1	+0	+0	+0	=	1

CONSTRUCTORS' WORLD CHAMPIONSHIP POINTS

(After Brazil, Portugal, San Marino, Monaco and Canada.)

1. Ferrari	9	+ 6	+ 1	+ 6	+ 15	=	**37**
2. Lotus	4	+ 12	+ 9	+ 4	+ 2	=	31
3. McLaren	9	+ 0	+ 3	+ 9	+ 4	=	25
4. Renault	2	+ 4	+ 4	+ 2	+ 0	=	12
5. Williams	0	+ 2	+ 2	+ 0	+ 4	=	8
6. Arrows	0	+ 0	+ 6	+ 0	+ 0	=	6
7. Ligier	1	+ 0	+ 0	+ 4	+ 0	=	5
8. Tyrrell	0	+ 1	+ 0	+ 0	+ 0	=	1

STARTING GRID

De Angelis Lotus Renault 97 T **1m 24.56s**		Senna Lotus Renault 97T 1m 24.81s	
Alboreto Ferrari 156/85 1m 25.12s		Johansson Ferrari 156/85 1m 25.17s	
Prost McLaren/TAG MP4 1m 25.55s		Warwick Renault RE 60 1m 25.62s	
Boutsen Arrows/BMW A8 1m 25.84s		Rosberg Williams/Honda FW10 1m 26.03s	
Piquet Brabham/BMW BT54 1m 26.30s		Tambay Renault RE60 1m 26.34s	
Cheever Alfa Romeo 185T 1m 26.35s		Berger Arrows/BMW A8 1m 26.74s	
Patrese Alfa Romeo 185T 1m 26.99s		Winkelhock RAM/Hart 03 1m 27.26s	
De Cesaris Ligier/Renault JS25 1m 27.40s		Mansell Williams/Honda FW10 1m 27.72s	
Lauda McLaren/TAG MP4 1m 28.13s		Fabi T. Toleman-Hart TG 185 1m 28.62s	
Laffite Ligier/Renault JS25 1m 28.75s		Surer Brabham/BMW BT54 1m 29.47s	
Alliot RAM/Hart 03 1m 29.90s		Ghinzani Osella/Alfa FA1 1m 31.57s	
Bellof Tyrrell-Ford 012 1m 31.72s		Brundle Tyrrell/Ford 012 1m 31.92s	
Martini Minardi/Moderne-Chiti 1m 34.95s			

THEIR FASTEST LAPS

Senna	1m 27.445s	Warwick	1m 31.367s
Rosberg	1m 27.611s	Boutsen	1m 31.688s
Cheever	1m 28.481s	Berger	1m 31.735s
Alboreto	1m 28.637s	Patrese	1m 31.978s
Johansson	1m 28.651s	Surer	1m 32.286s
Prost	1m 28.755s	Alliot	1m 32.325s
Tambay	1m 28.863s	Brundle	1m 32.485s
De Angelis	1m 29.156s	Bellof	1m 33.085s
Mansell	1m 29.331s	Winkelhock	1m 33.690s
De Cesaris	1m 30.070s	Ghinzani	1m 35.136s
Laffite	1m 30.324s	Fabi T.	1m 35.539s
Lauda	1m 30.433s	Martini	1m 36.757s

PREVIOUS WINNERS

(Last five editions)
1984: **Piquet** (Brabham-BMW BT53)
1983: **Arnoux** (Ferrari 126C2)
1982: **Piquet** (Brabham-BMW BT50)
1981: **Laffite** (Talbot-Ligier JS17)
1980: **Jones** (Williams-FW07B)

RACE LEADERS

Laps 1-15: De Angelis
Laps 16-70: Alboreto

FINAL RESULTS

1. Alboreto (Ferrari 156/85) 70 laps or 308.7 km/192.43 miles in 1 hour 46m 01.813s at an average speed of 174.686 kph/109.178 mph;
2. Johansson (Ferrari 156/85) 1 hour 46m 01.813s.
3. Prost (McLaren TAG MP4) 1 hour 46m 06.154s.
4. Rosberg (Williams-Honda FW 10) 1 hour 46m 29.634s.
5. De Angelis (Lotus Renault 97T) 1 hour 46m 45.162s.
6. Mansell (Williams-Honda FW10) 1 hour 47m 19.691s; 7. Laffite (Ligier-Renault JS25) 69 laps.
8. Tambay (Renault RE60) 69 laps.
9. Boutsen (Arrows-BMW A8) 68 laps.
10. Patrese (Alfa Romeo 185T) 68 laps.
11. Bellof (Tyrrell-Ford 012) 68 laps.
12. Brundle (Tyrrell-Ford 012) 68 laps.
13. Berger (Arrows-BMW A8) 67 laps.
14. De Cesaris (Ligier-Renault JS25) 67 laps.
15. Surer (Brabham-BMW BT54) 67 laps.
16. Senna (Lotus Renault 97T) 65 laps.
17. Cheever (Alfa Romeo 185T) 64 laps.
Race Lap Record: Senna (Lotus-Renault 97T) in 1m 27.445, at an average speed of 181.554 kph/113.471 mph.
Previous Record: Pironi (Ferrari 126 C2) in 1m 28.323s, at an average speed of 179.749 kph/112.343 mph.

DRIVERS	TEAMS	CARS	QUALIFYING TIMES	
1. Lauda	McLaren International	McLaren-TAG/MP4-2B/04 (T/MP4-2B/03)	1m 28.12s	1m 28.130s
2. Prost	McLaren International	McLaren-TAG/MP4-2B/05	1m 25.97s	1m 25.557s
3. Brundle	Tyrrell Ltd	Tyrrell-Ford 012/6 (T: 012/5)	1m 32.76s	1m 31.923s
4. Bellof	Tyrrell Ltd	Tyrrell-Ford 012/7	1m 32.58s	1m 31.733s
5. Mansell	Williams Racing Team	Williams-Honda FW 10/02 (T: FW 04)	1m 28.38s	1m 27.728s
6. Rosberg	Williams Racing Team	Williams-Honda FW 10/01	1m 26.25s	1m 26.097s
7. Piquet	Brabham MRD	Brabham BMW BT54/6 (T: BT54/5)	1m 27.00s	1m 26.301s
8. Surer	Brabham MRD	Brabham-BMW BT54/3	1m 30.20s	1m 29.473s
9. Winkelhock	RAM Grand Prix Ltd	RAM-Hart 03/3 (T: 03/2)	1m 31.14s	1m 27.266s
10. Alliot	RAM Grand Prix Ltd	RAM-Hart 03/1	1m 29.50s	1m 36.960s
11. De Angelis	John Player Team Lotus	Lotus-Renault 97T/3 (T: 97T/1)	1m 26.89s	1m 24.587s
12. Senna	John Player Team Lotus	Lotus-Renault 97T/2 (T: 97T/4)	1m 25.39s	1m 24.816s
15. Tambay	Equipe Renault Elf	Renault RE60/05 (5: RE60/04)	1m 26.95s	1m 26.340s
16. Warwick	Equipe Renault Elf	Renault RE60/03	1m 26.80s	1m 25.822s
17. Berger	Arrows Racing Team Ltd	Arrows-BMW A8/3 (T: A8/1)	1m 30.82s	1m 26.743s
18. Boutsen	Arrows Racing-Team Ltd	Arrows-BMW A8/4	1m 28.24s	1m 25.846s
19. Fabi T.	Toleman Group Ltd	Toleman-Hart TG 185/03 (T: 185/04)	1m 29.91s	1m 28.625s
22. Patrese	Benetton Euroracing	Alfa Romeo 185T/2 (T: 185T/1)	1m 28.08	1m 26.995s
23. Cheever	Benetton Euroracing	Alfa Romeo 185T/3	—	1m 26.354s
24. Ghinzani	Osella Squadra Corse	Osella Alfa FA1-G/85-2 (T: FA1-G/85-1)	1m 32.29s	1m 31.576s
25. De Cesaris	Ligier Sport	Ligier-Renault JS25/04 (T: JS23/03)	1m 28.74s	1m 27.403s
26. Laffite	Ligier Sport	Ligier-Renault JS25/01	1m 29.73s	1m 28.750s
27. Alboreto	Ferrari SpA	Ferrari 156/85-081 (T:156/85-080)	1m 25.12s	1m 25.832s
28. Johansson	Ferrar SpA	Ferrari 156/85-082	—	1m 25.170s
29. Martini	Minardi Team SpA	Minardi Moderni Chiti M 185/003 (T: 002)	1m 34.98s	1m 47.148s

McLaren-TAG Porsche (DPPI)

NIKI LAUDA PULLED OUT LEAVING ALAIN PROST ALONE TO HAUL IN THE TWO FERRARIS. HE SCORED ANOTHER 4 POINTS

Nigel Mansell (Williams Honda) Autopresse

BRITAIN'S NIGEL MANSELL POWERED ALONG IN THE COMPANY OF JACQUES LAFFITE, EDDIE CHEEVER AND THIERRY BOUTSEN

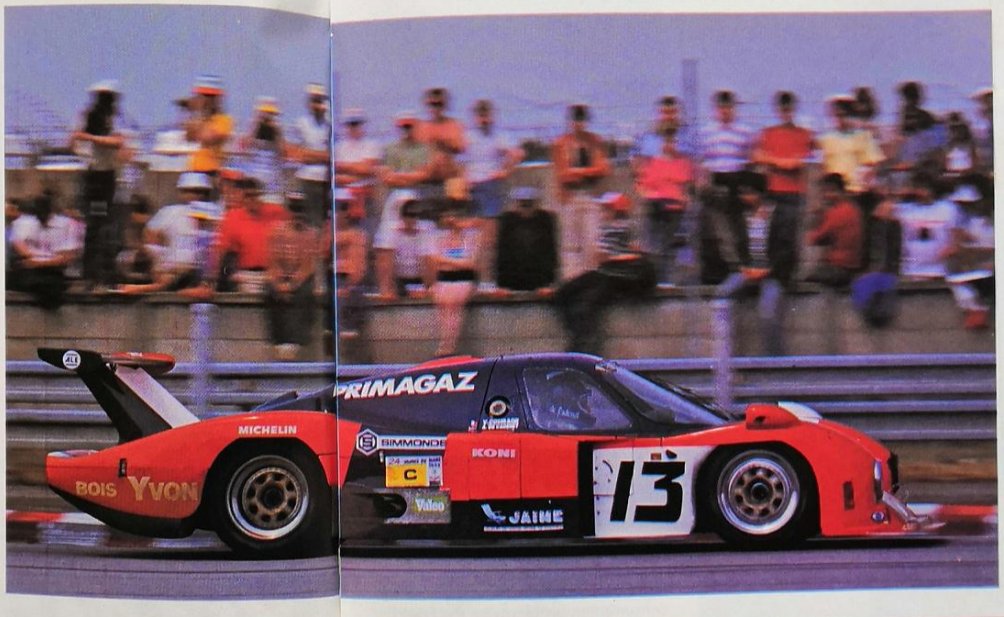
SET A PORSCHE TO CATCH A PORSCHE

LE MANS 24 HOURS

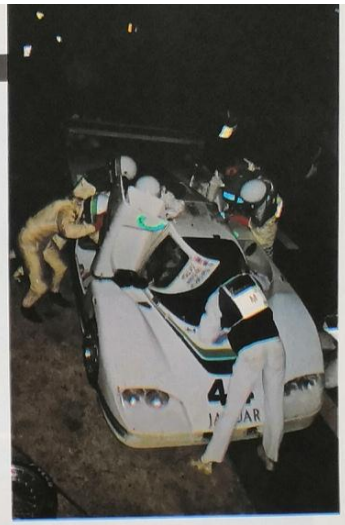
WITH ABOUT 200 OF THE ALLOTTED 2,210 LITRES OF FUEL LEFT AT THE END OF THE RACE, THE JOEST RACING PORSCHE 956, DRIVEN BY LUDWIG/BARILLA/WINTER COVERED 5,088.507 KM OVER THE 24 HOUR PERIOD, AN AVERAGE SPEED OF 212.021 KPH. A NEW RECORD FOR THE CLASSIC FRENCH RACE.

by Jean-Paul Renvoizé

Before the start of the 53rd Le Mans 24 Hours, the press seemed more than just a little sceptical. Headlines announced: "The Death of Endurance Racing", or joked: "The 24 Hour Economy Run" or talked about "The Limited Fuel Allowances and the Limited Sporting Interest", etc.
Just as in all other rounds of the World Endurance Championship (run over 1,000 km), the world famous French race obliged teams to carefully plan their tactics and rhythm. Each one had its own idea of how to finish the event with the fuel allowed; appropriate gearbox ratios, perfected aerodynamics, reduced turbo pressures, strict instructions to drivers... The Rothmans Porsche team, ie the factory, had painstakingly prepared the event after a voluntary absence in 1984 as a protest against the consumption rules. To most people's minds, they were the absolute favourites with the 962C, 600 bhp and current leader of the 1985 World Championship.
It came as no surprise, then, that the three works cars were all well placed on the starting grid. Pole-position went to Derek Bell, accompanied by Hans-Joachim Stuck, with a time of 3m 14.8s. Alongside him was the identical car of Jacky Ickx and Jochen Mass who had recorded 3m15.28s. The two Lancias, in the hands of Pescarolo/Baldi/Cesario and Wollek/Nannini/Cesario were on the second and third lines of the grid in the midst of the hoard of private

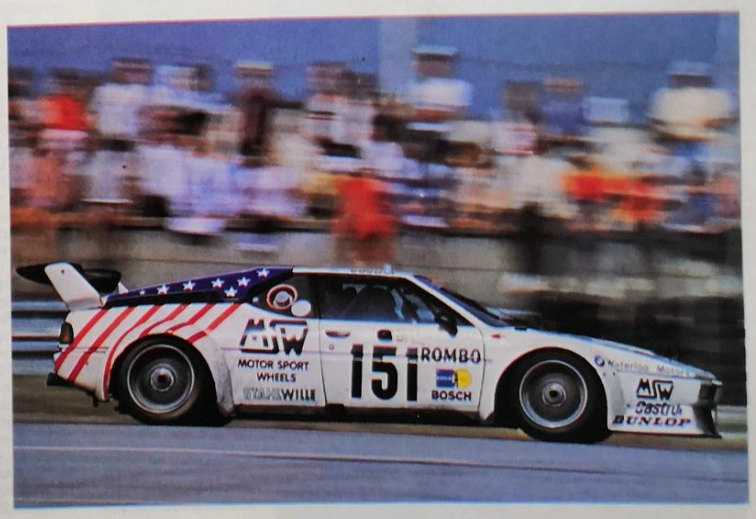


Fitzpatrick, Lloyd and Brun Motorsport teams. Race outsiders like the Emka Aston-Martin, Jaguar XRJ SS, Cougar-Porsche, Alba Carmo, WM Peugeots, Toyota-Dome, etc followed and, in all, there were 49 (out of a maximum 55) cars at the start.
It is interesting to note that Porsche engines were in the majority (16 against 14 Fords) and more than half (25) of the cars were equipped with either single or twin turbos. In fact, turbo-engines seemed to rule over the weekend and this was reflected in the final results. Neither the Jaguars' nor the Aston Martins' normally-aspirated engines were really in with a chance, although the Aston Martin, with its V8, got off to a fast start but was soon obliged to slow its pace and keep a watch on its fuel consumption.
The most important question in all team-managers' minds before this year's Le Mans 24 Hours was how Porsche entries from the Joest, Kremer, they were going to cope with the 15% reduction in the amount of fuel allowed. Reinhold Joest, being the sly old fox he is, had his own ideas for the NewMan Porsche.



SECRET PACT

Conscious that history has repeatedly shown that it is unwise to try out new techniques at Le Mans, his Porsche 956 was aerodynamically identical to the one that gave him his first success as team-manager here in 1984, the car being set up to give as much ground effect as possible. But possibly the most decisive factor was that he had opted to use the same Bosch electronic ignition as last year and not the new, specially-designed pack that

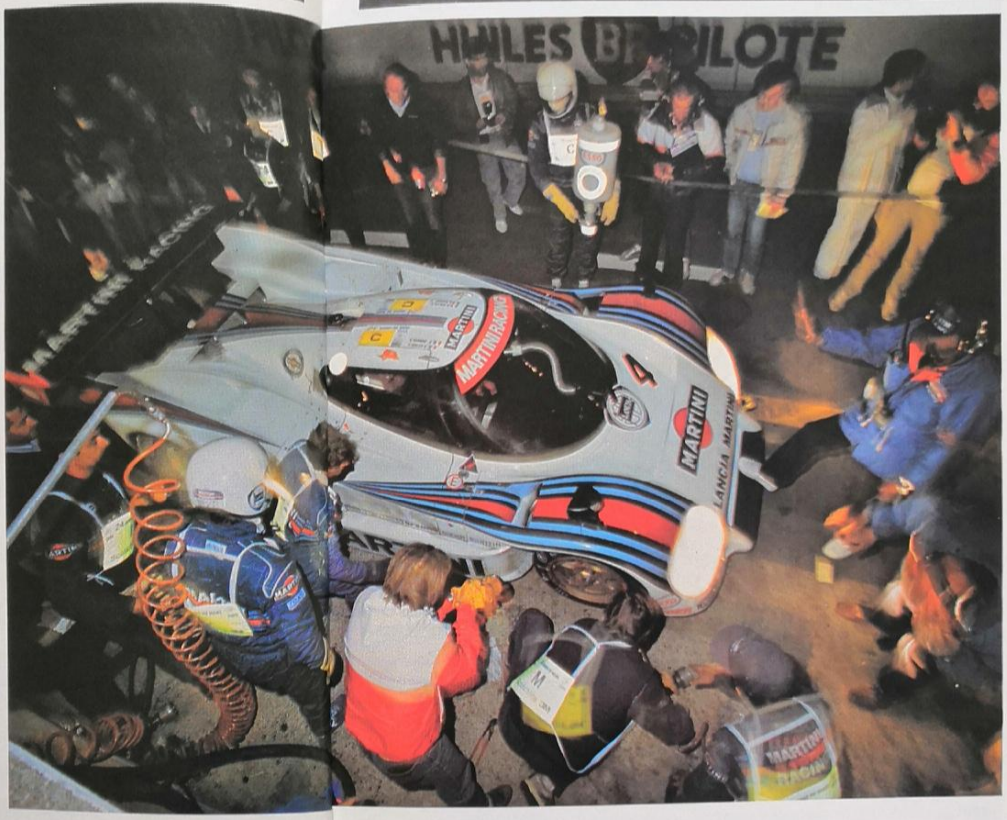


An impressive maiden WEC round for the Cougar-Porsche. (above)

One Jaguar held out for all of 24 hours. (top right)

One out of three M1s made it to the end to clinch the Group B title. (bottom)

Neatly designed with a well-prepared turbocharged 5-litre Mercedes V8 engine under the bonnet, the Sauber appeared to be fastest of the non-Porsche brigade during practice on Wednesday. Ozeki Hajime caught John Nielsen as he got the car into this spectacular sommersault over the Hunaudières bump, ruining his team's hopes of taking part in the world's most prestigious Endurance race.



Disappointing the Lancia Martinis at Le Mans. "Could have done better".

had been developed to cope with the consumption problems on the French circuit. A further detail, and one which none of the other Porsche teams (works or private) had thought of, was to allow the driver to modify the air-petrol mixture from inside the cockpit. Then, to make sure that he held as many trump cards as possible, he came to a secret agreement with Richard Lloyd before the start. The Joest/NewMan and Canon Porsches, the two most competitive private teams, would work together to beat the factory cars.

The two respective team-managers decided to adopt a pace which was a lot more audacious than the one Peter Falk imposed on his Rothmans 962s and, to be able to do that, the drivers were asked to slip-stream each other along the straights in order to save fuel. In this way, Klaus Ludwig and Jonathan Palmer were able to get off to a quick start without the overriding consumption worries that faced the other drivers. As they constantly overtook each other in the first hours of the race, everybody naïvely took it to be a suicidal duel between the two. Without the use of onboard computers, Ludwig and Palmer were able to build up a gap between themselves and the works cars and, thanks to their slip-streaming tactics, were able to keep under 7000 rpm along the Hunaudières Straight whilst taking each bend at the limit to avoid fuel guzzling acceleration on exit.

In the Rothmans Porsche and Martini Lancia camps, nobody was unduly worried about the two "hares" out front. They were all certain that Ludwig and Palmer would, sooner or later, dearly pay for their antics when it came round to refuelling. They were completely unaware of the fuel-saving features of the NewMan car.

Doubts began to rise as the first consumption figures came through. The Canon team, too, began to suspect that something was amiss since not only was Ludwig the fastest of the pair but he was also using less fuel.

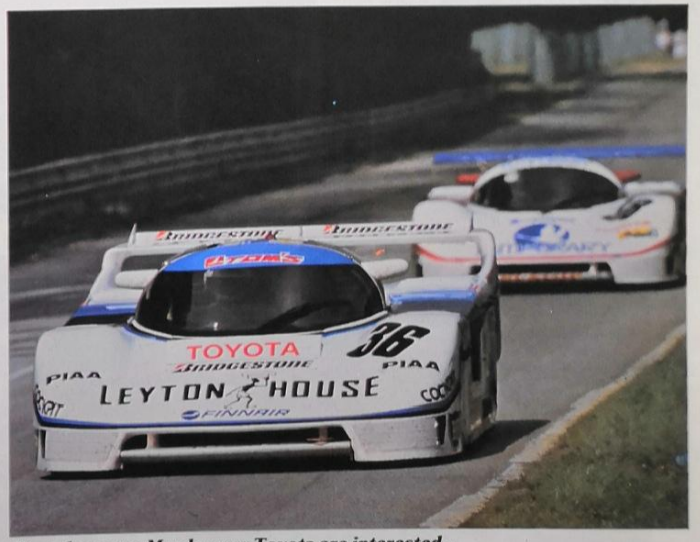
WINNING TACTICS

Just before midnight on the Saturday, after nearly 9 hours of racing, the engine on Palmer's car began to cough. Until then, he had never been more than fifteen seconds behind the Joest Porsche and that was only because his refuelling pitstops tended to take a little longer than Ludwig's. The English driver was forced to stop at his pits and it took the Lloyd Racing mechanics all of three laps to pinpoint and repair the problem. The Motronic ignition pack, the one that Joest had elected not to use, had failed and needed replacing. The same problem had already caused Jacky Ickx's Porsche to lose a lot of time. The importance of the incident can be fully appreciated when one considers that three laps are all that separated Palmer from Ludwig at the end of the race.

Consequently, the Joest Porsche was able to continue its race with a healthy safety margin. It was already clear that Ludwig would not be worried by fuel consumption despite being the fastest car. Furthermore, the German team was spared any mechanical problems which, to say the least, was not true of the other Porsche and Lancia teams.

We have got so used to seeing the Rothmans Porsches run like clockwork that it was a little surprising to see them plagued by a number of problems (badly fitted bodywork, badly mounted oil circuit, faulty anti-roll bar, hub failure (and, on Holbert/Schuppan/Watson's car, crankshaft failure). The time lost as a result of all these problems meant that the works drivers were obliged to go quicker to stay in touch and that, of course, meant higher fuel consumption.

Lancia's problem was that they had



First there was Mazda, now Toyota are interested...

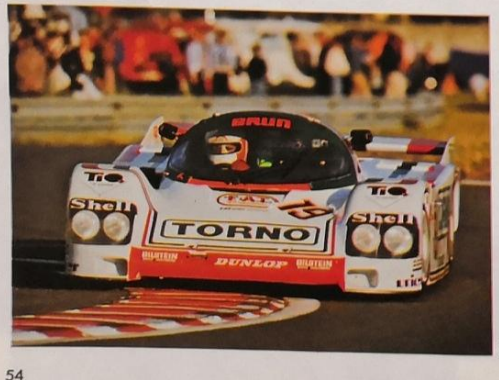
based their race tactics on those of the Rothmans Porsches, on paper their main rivals! But for this, the two Italian cars would certainly have finished higher, although a different strategy would probably not have avoided the loss of twenty or so minutes to change the turbo waste-gate on Wollek/Nannini's car nor a similar time loss for Pescarolo/Baldi because of a faulty starter and difficulties with a door not closing properly.

OTHER INCIDENTS

Behind Ludwig, the race continued and there were a number of incidents during the race. Alain de Cadenet's Cougar-Porsche and Larrauri's Porsche had come into contact with each other on the Hunaudières straight. De Cadenet continued but with damaged suspension but it couldn't have been much fun for him, especially when heavy vibrations and handling problems further handicapped the Cougar team. Ickx and Mass in the Porsche 962 made a number of stops at their pits to change a faulty electronic ignition pack and to change the gearbox after an oil pipe had split. Because of the amount of time lost, "Monsieur Le Mans", Jacky Ickx, was forced to quicken his pace which allowed him to break the lap record a number of times. Paul Belmondo was forced to retire after an accident just after the Dunlop bridge caused by cold tyres and rally driver Jean-Claude Andruet went out after leaving the road just before the Mulsanne bend at the end of the Hunaudières straight when a tyre burst.
In the Groups, the only survivor of a rather thin field of Group B cars was the BMW M1 of Doren/Birrane/Libert who finished a creditable 15th, 66 laps behind the leaders. Winners of the GTP category.
Tullius/Robinson/Ballot Lena took their Jaguar XRJ 5 to 13th place, 49 laps behind Ludwig, ahead of Spice/Bellm/Galvin's Tiga Cosworth, winners of a rather stormy Group C2 race within the race.
Indeed, the Group C2 struggle proved to be more interesting than overall lead. Early leader, Ray Mallock, in the Bovis sponsored Ecosse-Ford left the lead to Gordon Spice during the 13th hour when he was forced to retire with a blown engine. The Tiga-Ford, in turn, then had to make a number of pit-stops because of bodywork problems and that allowed the last remaining Mazda 737 through, in the hands of David Kennedy and the Martin brothers.
On the Sunday morning, however, the Japanese car dropped down the leader board following gearbox failure and Spice/Bellm/Galvin were able to regain the lead, keeping it until the end of the race.

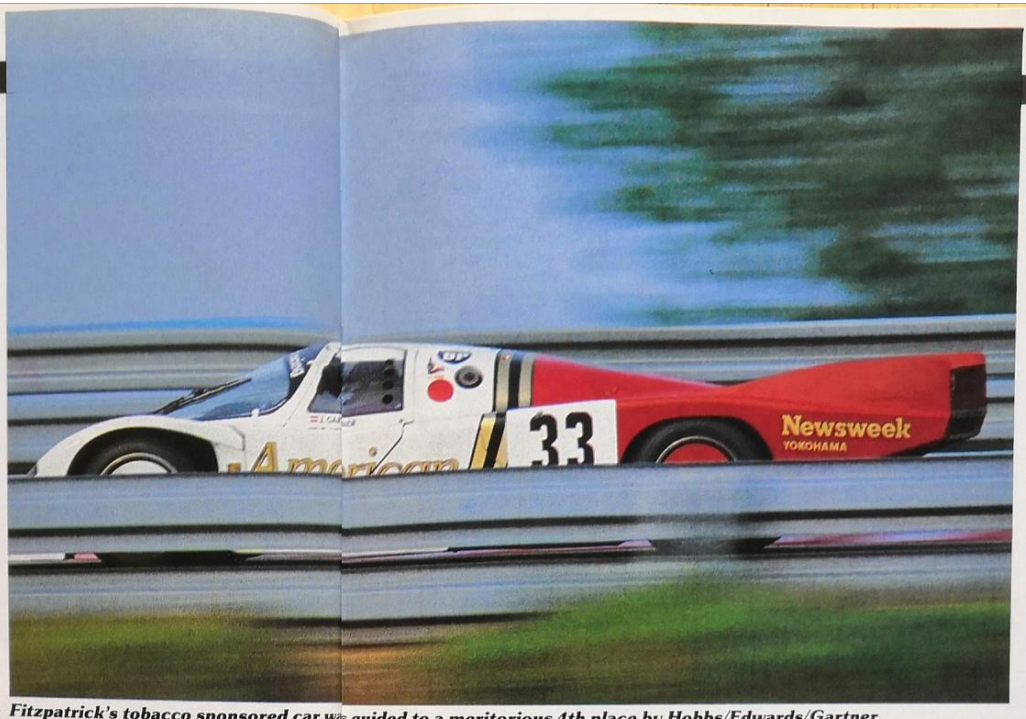
PARADOX

Despite those that claimed that this year's Le Mans 24 Hours would be devoid of interest, that there wouldn't be many spectators and that race performances would be disappointing, quite the contrary happened. The public turned out in greater numbers than last year, the race was not as monotonous as feared and the distance and lap records were beaten. Jurgen Barth, responsible for Porsche's "client", was not unduly surprised at the increase in public interest and in the record beating performances.
"I don't know why some people are hailing the death of Endurance racing", he declared shortly before the start. *"During practice this year, the Automobile Club de l'Ouest recorded an increase of 25% in the number of spectators! There are eight factory teams present. OK, Endurance racing has paid the price of unstable regulations over the last few years but that is all settled now, even if it does mean fuel restrictions. That's something that will tend to reduce the gap between the better off and less well off teams. All motors and all cars are now in with a more equal chance and that, to my mind, is progress. In*

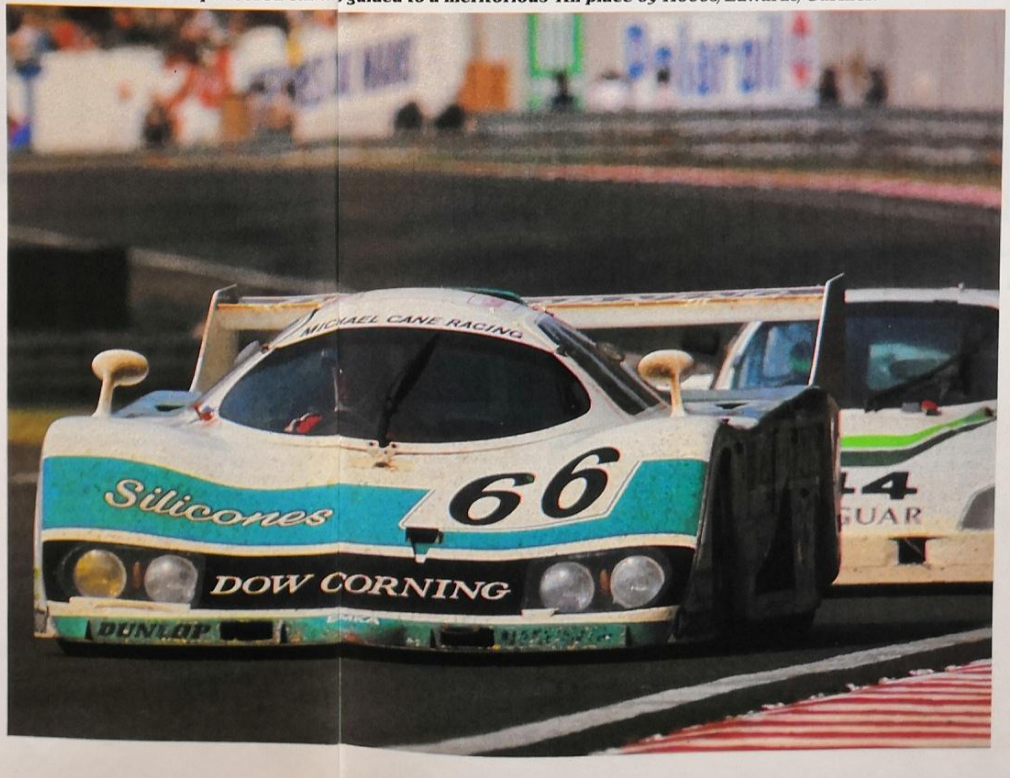


Walter Brun's 956s enthused the crowds. (left)

Needell/ O'Rourke/ Faure in the Emka Aston Martin finished as in this photo — ahead of the Group 44 Jag.



Fitzpatrick's tobacco sponsored car was guided to a meritorious 4th place by Hobbs/Edwards/Gartner.



From the pits

Mike Thackwell declared that he enjoyed the night driving. That's something you seldom hear and is even more relevant, since the New Zealand driver was competing at Le Mans for the first time.

Dudley Wood, who had an accident during early practice sessions on the Wednesday evening, was taken to hospital in the town of Le Mans with multiple abrasions and a leg fracture.

There were marked differences in fuel consumption figures at the end of the race. The winning Joest Racing Porsche 956 used less than 6 litres a lap (5.96 litres for Ludwig) whilst the Rothmans Porsche 962s used just over 6 litres (6.36 for Holbert and 6.38 for Bell). For Jaguar, the figure was way above this average.
At the finish, the NewMan Porsche still had 212 out of 2210 litres in reserve.

Canon said that they were relatively disappointed in the performance of the Porsche that they have sponsored now for the last three years in Endurance racing. It is possible that they might stop their activities in this area to concentrate on F1 where they are already involved with Williams.

All the major tyre manufacturers were present except for Pirelli. The league table was: 1st, Dunlop (14 cars + 3 Dunlop Japan); 2nd, Avon (13 cars); 3rd, Michelin (8 cars); 4th Goodyear (7 cars) followed by Yokohama and Bridgestone.

The biggest engine? The Jaguar Group 44 with its V12, IMSA GTP at 5955 cc. The smallest? The Group C2 Tiga-Ford's 4 cylinders with 2380 cc (1700 cc + turbo coefficient).

Bob Wollek won the Le Mans/Daytona trophy. After finishing 8th at Le Mans in 1984 and winning Daytona this year, the French driver received his prize the day before the start of this year's race.

There were no Pontiac Firebirds at Le Mans this time. The cars were too far behind in their preparation, so the two IMSA category cars stayed in the States. Shame!

The Silverstone/Le Mans Trophy was won by Bell/Stuck (2nd in England and 3rd in France).

No less than 927 marshals were present this year, posted along the 13.626 km long circuit.

After this year's race, the league table of the most experienced drivers on the French circuit is: 1st, Claude Ballot Lena (20 participations); 2nd, Henri Pescarolo (19); 3rd, Claude Haldi (18); 4th, Jean-Claude Andruet (17); 5th, David Hobbs (16); 6th, Jacky Ickx (15). It's worth noting that the last named driver holds the record for the number of victories (6).

Thanks to their Group C2 victory at Le Mans, Spice and Bellm (Tiga Cosworth) strengthen their position as leaders of the F.I.A. C2 prototype Trophy.

any case, that's the only way we will be able to bring other manufacturers and Nissan were looking for such a stable, more equitable situation before committing themselves. Getting back to Le Mans, I don't think that the race will be boring. Race tactics are going to play an important role and, whoever wins, will have deserved it."

Barth didn't say whether he was aware of Joest's tactics at this moment before the race but, even if Peter Falk is disappointed at the result, Ludwig's victory means that the German manufacturer has now won the French classic ten times and, as it is now beginning to happen in F1, has proved that advanced technology does not necessarily have to go hand in hand with increasing fuel consumption. Ludwig's victory shows that we are taking a step in the right direction.

JOEST, THE ECONOMY KING

The first consumption figures to filter through at Le Mans immediately showed that the Joest Racing Porsche 956 was a lot less thirsty than most of its main opponents. The NewMan car driven by Ludwig/Barilla/Winter was given at 40 litres per 100 km, whilst the others were averaging between 42 and 50 litres!

You could see the surprise on the faces of the other teams' engineers. Was Ludwig using the 3-litre engine, known to be more economical than the 2.71 version, or was he benefiting from some major aerodynamic modification? At first, given the pace that the German driver was maintaining, most observers believed that the Joest team had got their calculations all wrong. Far from it. Joest and his engineers had perfectly worked out their tactics, basing themselves on a "distance completed" factor rather than the "time" factor like most other teams. It became clear, as the consumption figures came through that the NewMan Porsche would be able to continue its rhythm without having to worry about fuel economy.

Joest's secret? Quite simple really but only the grey-templed German was daring enough to apply it. His engineers had worked hard to get the 6-cylinder engine to run on as weak a petrol/air mixture as possible. So weak, in fact, that the factory declined all responsibility for the risks of piston failure, especially if the weather turned out to be as scorching hot as it sometimes can be. Joest, however, had thought of that and had fitted two alternative programmes for the Bosch Motronic ignition but, as it turned out, the drivers did not have to resort to them.

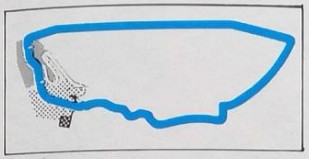
A further, very important advantage for the NewMan team was that they were able to use the talents of Klaus Ludwig, winner of the French race on two previous occasions. Ludwig's experience allowed him to drive smoothly, keeping in as high a gear as possible, avoiding snatchy gear changes, accelerating smoothly out of bends and wisely benefiting from the slip-streaming effect from other competitors.

"At the beginning of the race, I was able to slip-stream Palmer's Porsche," explained the German driver. *"As a result, I was able to reduce the turbo pressure and it was soon clear that we would have no consumption worries. When the pace car came on to the circuit following Andruet's mishap, we had no need to change our rhythm. I used this time to work on the car but I would like to underline that we experienced no mechanical problems whatsoever and the car only underwent routine checks throughout the race."*

When we mentioned that his race seemed, from the track-side, to be an easy drive, the driver of the NewMan Porsche retorted, *"That's maybe the impression you got from outside the car but if you'd been inside with me you'd have realised that that was far from the truth. I had to constantly fight with the turbo pressure on minimum, whilst having to brake as late as possible and changing gear as seldom as possible! And all the time the car was set up with minimum downforce. No, really, I can assure you that it wasn't at all as easy as it may have appeared."*

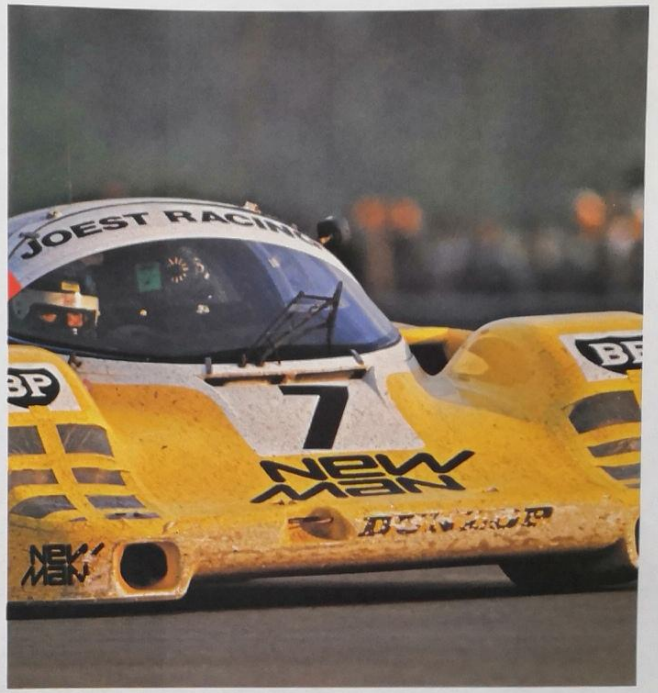
LE MANS 24 HOURS

Le Mans 24 Hours, round three of the World Endurance Championship for makes and round four of the Drivers' World Endurance Championship.
Date: June 15, 1985.
Circuit: Le Mans.
Track Length: 13.626 km/8.47 miles.
Weather: Dry and mild.
Starters: 49. **Finishers:** 29. **Qualified:** 24. **Retirements:** 20.



QUALIFYING

2. Bell/Stuck (Rothmans Porsche 962) 3m 14.80s; 1. Ickx/Mass (Rothmans Porsche 962) 3m 15.28s; 4. Wollek/Nannini/Cesario (Martini Lancia) 3m 15.95s; 7. Ludwig/Barilla/Winter (New-Man Joest Porsche 956) 3m 20.03s; 3. Holbert/Schuppan/Watson (Rothmans-Porsche 962) 3m 22.98s; 5. Pescarolo/Baldi/Cesario (Martini-Lancia) 3m 23.46s; 10. Hytten/Fouche/Van der Merwe (Kremer Porsche 956) 3m 24.13s; 8. Belmondo/de Navarez/Miller (New-Man Joest Porsche 956) 3m 25.52s; 14. Palmer/Weaver/Lloyd (Porsche 956 Lloyd Racing) 3m 25.58s; 18. Sigala/Larrauri/Tarquini (Porsche 956 Brun Motorsport) 3m 26.67s; 19. Brun/Gouhier/Theys (Porsche 956 Brun Motorsport) 3m 30.33s; 33. Gartner/Hobbs/Edwards (Porsche 956 Fitzpatrick) 3m 32.84s; 66. Needell/O'Rourke/Faure (Porsche 956) 3m 33.30s; 11. Jarier/Thackwell/Konrad (Porsche 956 Kremer) 3m 33.41s; 44. Tullius/Robinson/Ballot Lena (Jaguar XJR 5 V.12) 3m 35.32s; 40. Redman/Haywood/Adam (Jaguar KJR 5 V.12) 3m 37.29s; 13. Courage/de Cadenet/Yvon (Courage-Porsche Primagaz) 3m 38.18s; 43. Haldi/Dorchy/Andruet (WM Peugeot V6) 3m 38.40s; 80. Finotto/Bertuzzi/Dacco (Alba-Carma) 3m 42.62s; 42. Pignard/Raulet/Rondeau (WM Peugeot V6) 3m 43.07s; 38. Elgh/Leeds/Suzuki (Toyota Dome 85 C) 3m 43.77s; 79. Wilds/Mallock/Leslie (Ecosse Ford Cosworth) 3m 44.17s; 34. Duxbury/Danner/Coppelli (March 84 G Porsche) 3m 44.84s; 82. Giangrossi/Barberio/Radicella (Alba Grifo Cosworth) 3m 46.97s; 67. Witmeur/de Thoisy/Gonin (Rondeau Cosworth V8) 3m 47.53s; 74. Jelinsky/Graham/Adams (Gebhardt Ford Cosworth) 3m 47.76s; 70. Spice/Bellm/Galvin (Tiga Ford Cosworth) 3m 48.08s; 36. Nakajima/Hoshino/Sekiya (Toyota Tom's 85) 3m 48.67s; 41. "Panic"/Pessiot/Fornage (WM Peugeot V6) 3m 49.20s; 31. Yver/Rousselot/Servanin (Rondeau Ford Cosworth) 3m 49.52s; 77. Davey/Crang/Lanfranchi (Tiga Ford Cosworth) 3m 50.37s; 100. Jones/Smith/Cohen Olivar (Chevron Ford Cosworth) 3m 51.77s; 39. Sotty/Justice/Oudet (Rondeau Cosworth V8) 3m 51.86s; 90. Winther/Mercer/Smith Haas (URD BMW) 3m 52.17s; 104. Dubois/Striebig/Del Bello (Rondeau Cosworth V8) 3m 52.79s; 152. Grohs/Heger/Koenig (BMW M.1) 3m 54.28s; 75. Harrower/Earle/Sheldon (Gebhardt Ford Cosworth) 3m 55.62s; 46. Bussi/Griffin/Speer (Rondeau Cosworth V8) 3m 55.65s; 85. Katayama/Terada/Yorino (Mazdaspeed 737) 3m 57.73s; 24. De Dryver/Cooper/Bourgoignie (Cheetah Aston-Martin) 3m 58.33s; 151. Doren/Birrane/Libert (BMW M.1) 4m 00.31s; 55. Acheson/Wood/Schlesser (Porsche 956 Fitzpatrick) 4m 00.39s; 86. Kennedy/JM Matin/P. Martin (Mazdaspeed 737) 4m 00.78s; 95. Bassaler/Lacaud/Tapy (Sauber BMW) 4m 02.88s; 99. Smith/Hoyt/Nicholson (Toga Ford Cosworth) 4m 05.13s; 157. Calderari/Pallavicini/Vanoli (BMW M.1) 4m 08.70s; 93. Descartes/Heuclin/Hubert (Ald-BMW) 4m 18.26s; 98. Duret/Andrews/Smith (Tiga-Ford Cosworth) 4m 18.71s; 156. Touroul/Perrier/Demargne (Porsche 911 SC 3 litres) 4m 19.36s.



RETIREMENTS

Mallock/Wilds/Leslie (Ecosse Ford C2): oil pressure.
Andruet/Dorchy/Haldi (WM Peugeot): off, puncture.
Redman/Haywood (Jaguar KJR 5): transmission.
Finotto/Bertuzzi/Dacco (Alba Carma C2): engine.
Belmondo/de Navarez/Miller (New-Man Porsche 956): off.
Holbert/Schuppan/Watson (Rothmans Porsche 962): camshaft.
Larrauri/Sigala/Tarquini (Porsche 956): gearbox.

WORLD ENDURANCE CHAMPIONSHIP (MAKES)

1. Rothmans-Porsche 52 points; 2. Kremer-Porsche 33 points; 3. Martini-Lancia 28 points; 4. Joest-Newman 26 points; 5. Canon-Lloyd 23 points; 6. Brun Motorsport-Obermaier 13 points; 8. Fitzpatrick 10 points; 9. Spice 4 points; 10. Carma FF 3 points.

DRIVERS' WORLD ENDURANCE CHAMPIONSHIP POINTS

1. Ickx/Mass 51 points. 3. Surer/Winkelhock 45 points. 5. Stuck/Bell 42 points. 7. Ludwig 34 points. 8. Palmer 31 points. 9. Nannini 30 points. 10. Barilla 28 points.

FOR THE RECORD

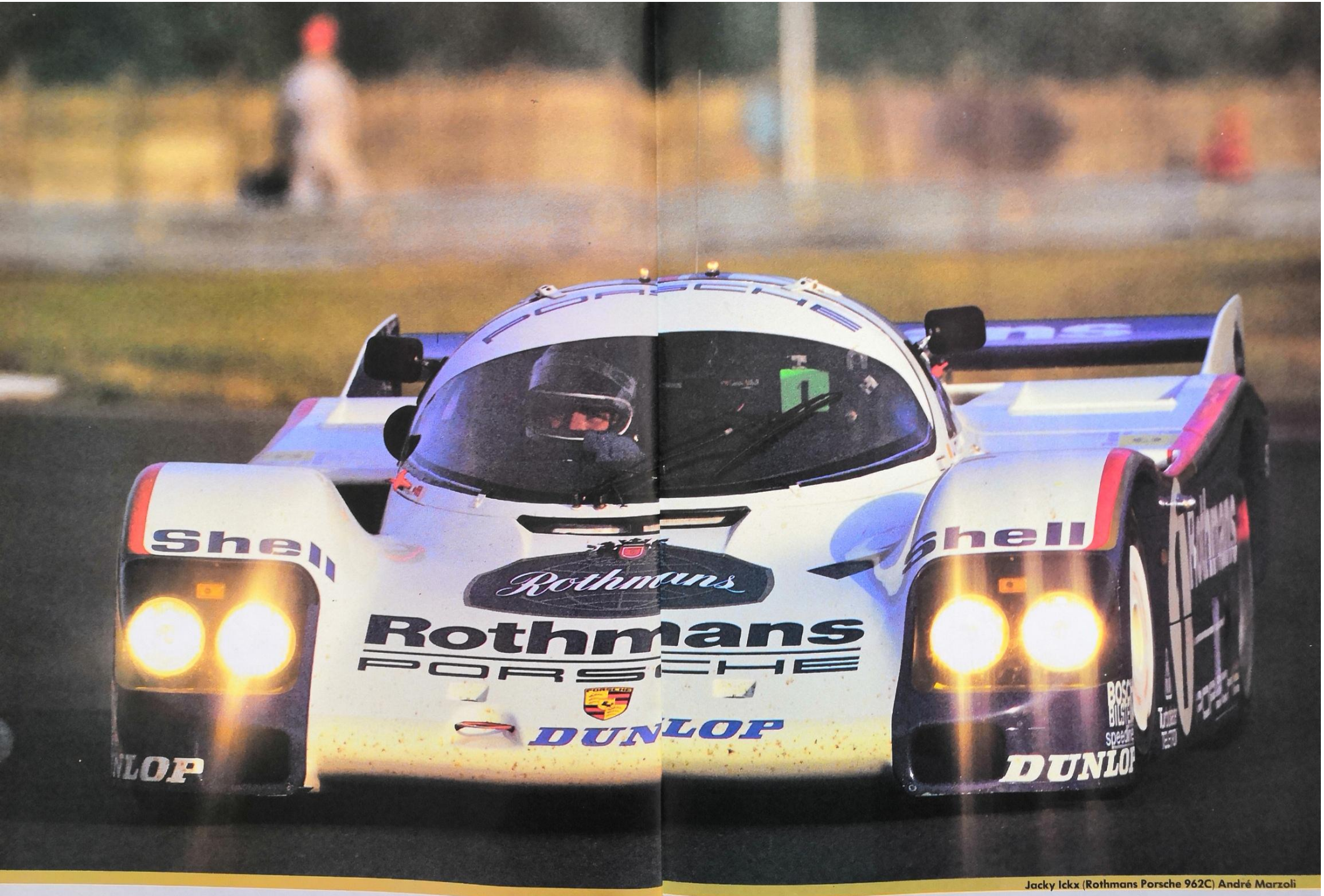
Top speed (Hunaudières): Klaus Ludwig (Newman Joest Porsche 956) 372 kph during qualifying.
Race Lap Record: Jacky Ickx (Rothmans-Porsche 962C) 3m 25.15s, at an average speed of 239.169 kph.
Race Distance Record: Ludwig/Barilla/Winther (Newman Joest Porsche 956) 5,088.507 km at an average speed of 212.021 kph. **Previous Race Distance Record:** Holbert/Schuppan/Haywood (Porsche 956) 5,057.94 km in 1983.

FINAL RESULTS

1. Ludwig/Barilla/Winter (Porsche 956 Joest-Newman) 5088.507 km or 374 kps at an average speed of 212.021 kph; 2. Palmer/Weaver (Porsche 956 Canon) 371 laps; 3. Bell/Stuck (Porsche 952 Rothmans) 367 laps; 4. Gartner/Hobbs/Edwards (Porsche 956) 366 laps; 5. Hytten/Fouche/Van der Merwe (Porsche 956) 361 laps; 6. Wollek/Nannini/Cesario (Lancia Martini) 360 laps; 7. Pescarolo/Baldi (Lancia Martini) 358 laps; 8. Laessig/Pareja/Regout (Porsche 956) 357 laps; 9. Jarier/Thackwell/Konrad (Porsche 956 Kremer Sonauto) 356 laps; 10. Ickx/Mass (Porsche 962 Rothmans) 348 laps; 11. Needel/O'Rourke/Faure (Emka-Aston Martin) 338 laps; 12. Nakajima/Sekiya/Hoshino (Toyota Tom's) 331 laps; 13. Tullius/ Robinson/Ballot Lena (Jaguar XJR 5) 325 laps; 14. Spice/Bellm/Galvin (Tiga Cosworth) 313 laps; 15. Doren/Birrane/Libert (BMW M.1) 308 laps; 16. Harrower/Earle/Sheldou (Gebhardt-Cosworth) 299 laps; 17. Pignard/Raulet/Rondeau (WM Peugeot) 299 laps; 18. Sotty/Justice/Oudet (Rondeau) 292 laps; 19. Kennedy/Martin/Martin (Mazda 737 C2) 248 laps; 20. Courage/de Cadenet/Yvon (Courage-Porsche) 280 laps; etc.

Brian Redman (Jaguar XJR 5) DPPI

THIRSTY ENGINES THESE JAGUAR V12s BUT IT WAS FINALLY THE TRANSMISSION THAT LET REDMAN/HAYWOOD/ADAM DOWN

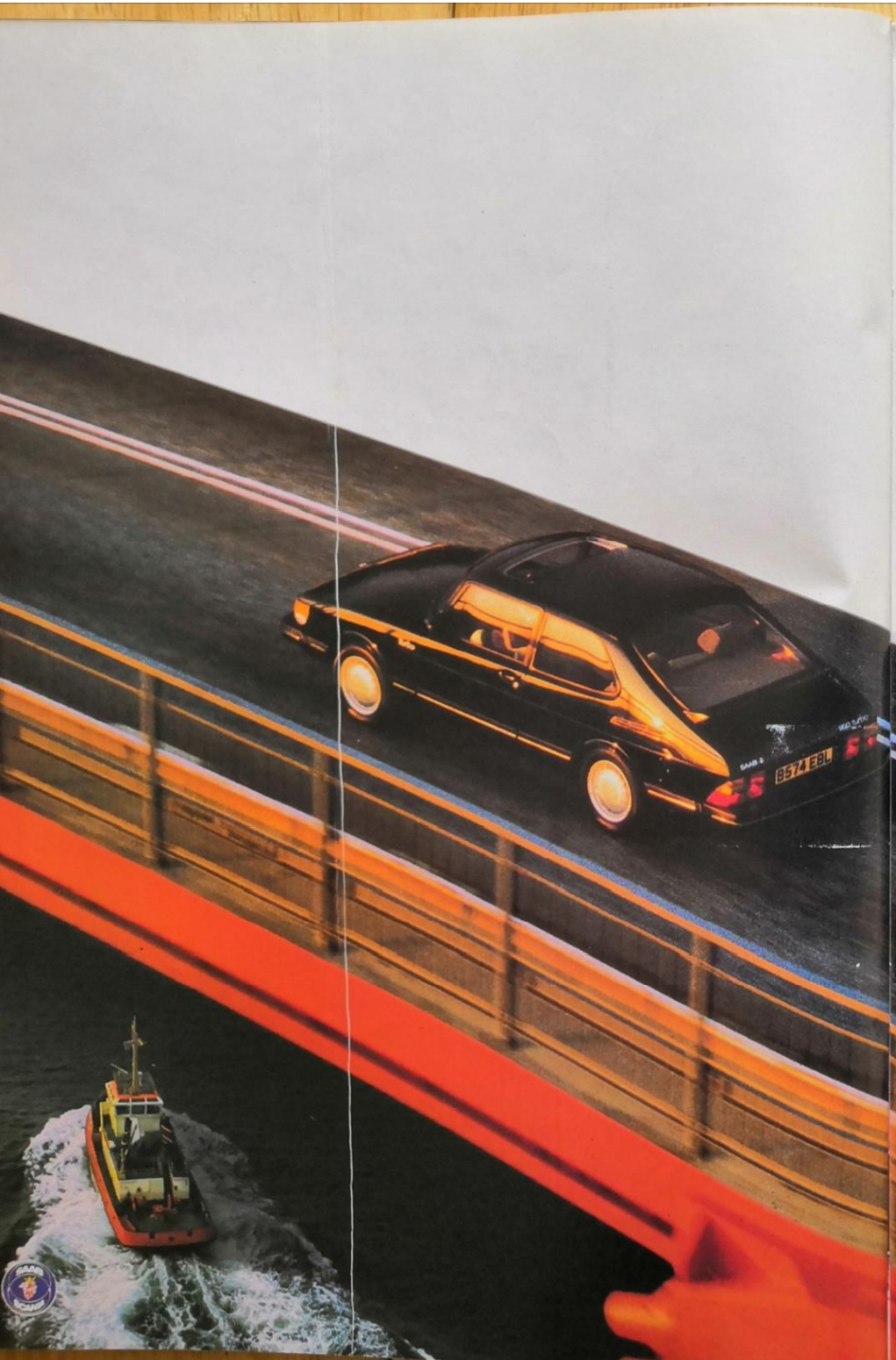


Jacky Ickx (Rothmans Porsche 962C) André Marzoli

THE OFFICIAL STUTTGART CARS WERE PLAGUED WITH PROBLEMS AND WERE RUN ROUND BY THE 956 PRIVATEERS

Duxbury/Danner/Coppelli (March 84G Porsche) Gérard Dalla Santa

SCHECKTER WAS ORIGINALLY DOWN TO DRIVE THE KREEPY KRAULY CAR WHICH ONLY JUST SCRAPED THROUGH SCRUTINEERING



THE PRICE QUOTED (CORRECT AT TIME OF GOING TO PRESS) INCLUDES FRONT AND REAR SEAT BELTS, CAR TAX AND VAT, BUT EXCLUDES DELIVERY, ROAD TAX AND NUMBER PLATES. *AUTOCAR

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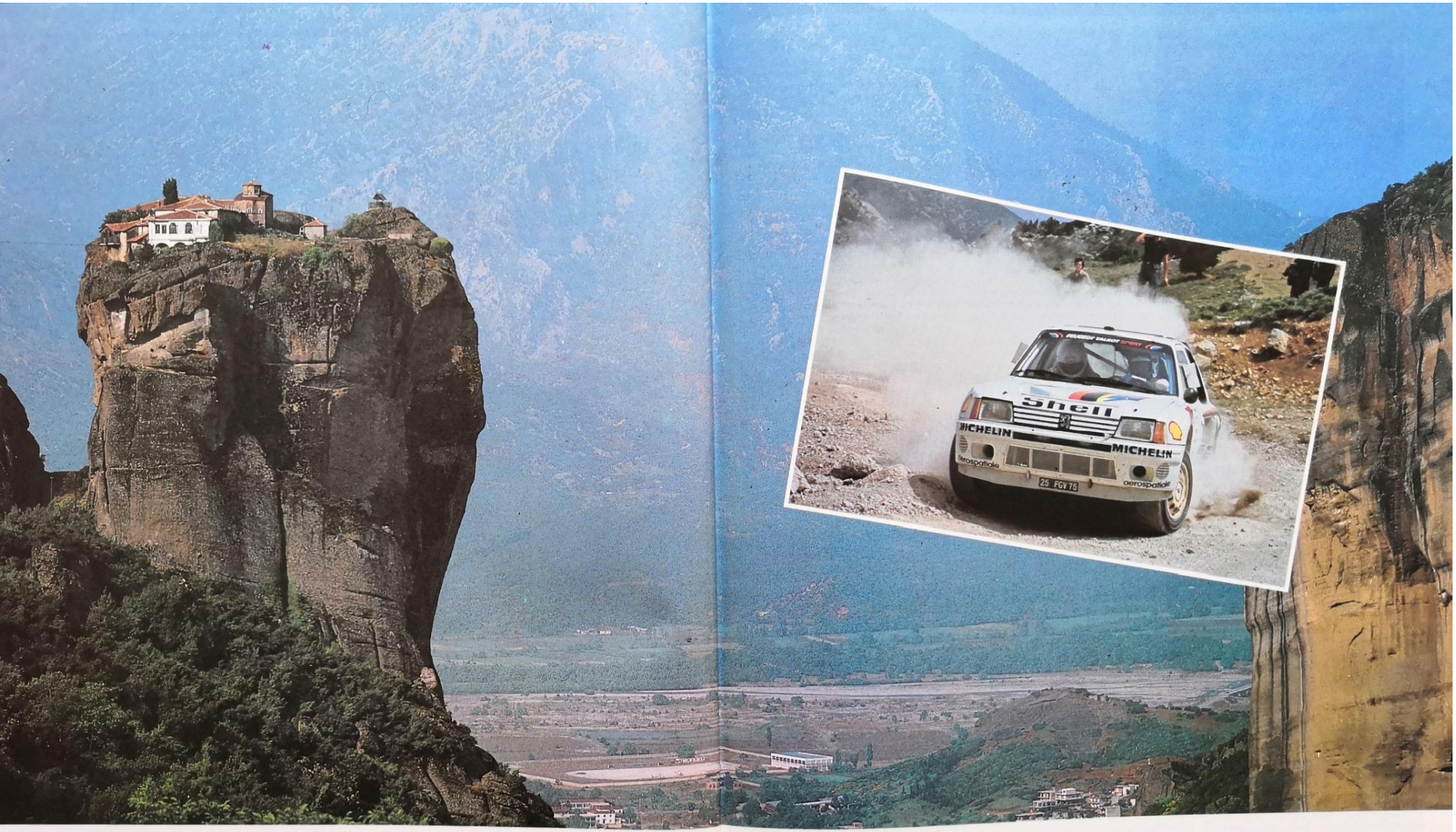


ACROPOLIS RALLY

BACK TO NORMAL

AFTER SIX CONSECUTIVE WINS, FOLLOWED BY THE SAFARI AND CORSICAN DISAPPOINTMENTS, PEUGEOT HAVE GOT BACK INTO THEIR WINNING WAYS THANKS TO SALONEN IN GREECE. HIS VICTORY PUTS PEUGEOT IN A COMFORTABLE POSITION IN THE WORLD CHAMPIONSHIP FOR MAKES AS WELL AS CONSOLIDATING HIS OWN LEAD IN THE DRIVERS' CHAMPIONSHIP.

by Jean-Paul Renvoizé

A snapped throttle cable and out went Zanussi.

Timo Salonen seems to have lost a little weight over the last few months despite the fact that he is now smoking less. As he boarded the *"Ajax"*, the boat that ferried the 45 remaining crews from Poros to Athens after the Peloponese loop, he appeared not to notice the magnificent Mediterranean scenery around him. It would be more correct to say that he was exhausted. Exhausted yet happy, happy to have at last scored the win that he has always deserved and happy with the fact that, from now on, he must be considered as one of the world's great drivers.

At the age of thirty four and for the first time in his career, the Finn seems to be well set to take the drivers' crown. He knows it and is working hard to make it reality ever since his first win in Portugal at the beginning of the year.

Even if he still looks more like a country vicar, make no mistake, his ambition and professional approach to the sport are more apparent than ever. Since his spine operation some time ago, Timo is a changed man, both morally and physically, and can now be likened to an athlete who strives for perfection in his speciality.

After the early retirements in Greece of Vatanen and Röhrl, the traditional Peugeot/Audi duel was left in the hands of Salonen and Blomqvist but the battle between the two Scandinavians never took place, such was the supremacy of the Peugeot driver. *"Each time I made up my mind to put the pressure on Timo, a problem cropped up on my car,"* explained Blomqvist. Indeed, Salonen appeared determined to set a hard pace from the outset which he was able to maintain throughout the first two legs from Athens to Kalambaka and back down to Lagonissi. His lead over Blomqvist, 6m54s, as the event moved into its final phase spoke for itself. From that moment, the Finn was able to relax a little, content to just watch his rival and, at the same time, avoid mechanical problems by taking it easy over the rougher parts. You could feel the entire Peugeot team urging him on through that last night. In fact, that's probably one of the keys to his success. The Peugeot Talbot Sport mechanics, with their habitual dedication, literally willed the car through the Peloponese loop, pampering her like a trainer pampers a thoroughbred race-horse.

In such conditions, with a less agile, slower car and with the various problems that plagued him as soon as he tried to quicken his pace, Blomqvist's task was hopeless. The only thing he could hope for was that the Peugeot 205 Turbo 16 would succumb to its own mechanical problems which, of course, just didn't happen.

The Acropolis justifiably has the reputation of being a car-breaker. That Salonen was able to win so convincingly, with no mechanical incidents to speak of, is further proof of the French car's increasing reliability and competitiveness over tough terrain. After letting two rallies slip through their fingers, the Peugeot team is back in its stride, boasting seven victories out of their last nine outings.

PROFESSIONALISM AND MODESTY

If you had to describe the principal attributes that have made Jean Todt's Peugeot Talbot Sport team into today's leading rally outfit, you would have to talk about their professionalism and modesty. The 205 Turbo 16 is dominating the 1985 championship in keeping with the ambitious programme which was established not so long ago, to win the World Rally Championship in 1985. Seven victories out of 11 rallies entered since Corsica last year can, by no means of the imagination, be put down to luck. This fantastic success story is the result of continuous work and effort.

From the outset, the objectives were clearly defined and the choice of men to meet those objectives has turned out to be the perfect one. There is an extraordinary will to succeed amongst the team and you cannot help but notice the hyper-professionalism and hyper-motivation that runs through each department of Peugeot Talbot Sport. OK, you may say, their task has been made a lot easier thanks to the immense resources that they have available but don't forget that the French manufacturer was not the first to employ the likes of helicopters, or to undergo extensive, on-site, pre-rally testing. Other teams had already realised that in rallying, as in many other things, the end justifies the means, it had become a part of the sport. Jean Todt is as conscious of this change as anybody, since he was part of probably the last of the traditionally structured teams to win the World Championship with Talbot and Des O'Dell's Sunbeam Lotus back in 1981. Despite his strict, pragmatic approach to the sport and despite his long experience, he is not afraid to admit that he has learnt a lot from his rivals.

THE EVENT

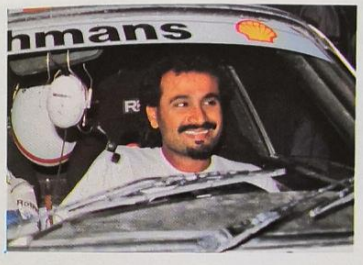
Total distance of the 32nd Acropolis Rally was 2296 km, including 808 km of special stages. These were mainly over gravel roads but there were 6 km of tarmac. The rally was divided into three sections as in previous years with the first leg taking crews from Athens to Kalambaka on Monday, May 27. 286 km of the 826 km were divided into 17 stages. The following day, the second leg led from Kalambaka to Lagonissi, 50 km south east of Athens, with 16 stages totaling 283 km (out of 756 km) on the menu. Finally, after a whole night and day's rest, the survivors were faced with 239 km of stages (14) out of 706 km on the famous Peloponese loop, then, from Poros, cars were shipped to Port Faliron before rallying the Glyfada finish.

A FRIEND IN NEED

Timo Salonen and Shekhar Mehta were, of course, formerly both members of the same team with Nissan. It's not surprising then that the two drivers should remain good friends. The organisers of the Acropolis had decided to give Mehta the number 4 and Salonen the number 5. Thanks to the new regulation that allowed for a two minute gap between cars on stages, the Finn was not at all handicapped by the dust thrown up by his former team-mate, on the short stages at least. However, both of them knew very well that Salonen was more or less certain to catch up on the longer stages. In order to avoid the finn overtaking each time, a sometimes dangerous manoeuvre, the Nissan driver pulled up between the time control to change a wheel. Stage start officials were not to be had and they checked the state of Mehta's four wheels. Seeing that there was no puncture, they called the Kenyan base driver to start the stage before Salonen.

"I was in the Nissan's dust after about ten miles into the stage," explained Timo Salonen, *"but I wasn't able to get close enough for Shekhar to see me. Luckily, soon after there were a number of downhill hairpins. By chance he looked up at that moment, spotted me and stopped a little further on to let me pass."* The Peugeot driver took fastest time on that stages, 36 seconds ahead of Blomqvist.

Not to be put off, they decided to try and pull the puncture trick at the start of the following stage and, this time, the marshalls really believed that Nissan had a puncture and they called Salonen up to the start line. With the Finn now in front on the road, Mehta no lnger needed to get his hands dirty before tackling each stage.



Saeed Al Hajri finished an excellent 5th

The two-wheel drive brigade is at an obvious disadvantage compared with their four-wheeled opponents. Mehta (Nissan) tried hard but in vain (bottom).

HAPPY LANDING

The life of the rally mechanic is getting decidedly dicier. The sight of helicopter service crews on World Championship rounds is no longer exceptional and three such machines were following the main teams in Greece. Peugeot using the services of the French Aérospatiale group, Audi present with a brand new one and another available for the West sponsored Lancia team. By the time the rally had made its way back to Lagonissi, only the former was still in a state to fly. The Audi chopper hand one of its rotors brake after a brush with a tree during a quick take-off whilst the Lancia machine had an alarming moment as the pilot tried to land it on a slope. Like a giant mosquito, after a number of bounces, it came to rest ten or so yards further down the hill. The passengers were unhurt, even if they were more than just a little startled.

HARD TO HANDLE

Clutch? Gearbox? There was a bit of a panic amongst the Rothmans Porsche service crew at the end of the last stages of the first leg. The Rothmans driver for the event, Saeed Al Ahri from Qatar, was finding it hard to change gear. The mechanics checked everything it was possible to check to no avail until one of them decided to have a look inside the car... the window handle had come loose and had become stuck under the clutch pedal.

All's well that ends well, except that Saeed had dropped three places down the leader board as a result.

ence of the ins and outs of rallying, Jean Todt is extremely cautious when he talks about his team's progress towards meeting those famous objectives which were announced when the French Gp B car was unveiled.

During each event and each time he talks about the team, he shows signs of reserve quite contrary to the way he used to be in his codriver days. Take his comments after the Acropolis for example: *"Right up until the last control, I just couldn't stop myself from thinking about all the things that could go wrong. And when you start to think like that, there are an incredible number of parts that can come loose on a rally car. Timo's retirement in Corsica and Vatanen's here in Greece made us all wory. Having said that, I'm forever surprised that there are no more minor problems, things like bolts that become loose or gaskets that fail, especially when you see the type of stages the cars are competing over! The overall robustness of the cars is quite amazing. In any case, to my mind, it is an absence of modesty that causes problems in teams."*

Was he thinking of anyone in particular with that last remark?

It is clear that, for Todt, a rally isn't finished until the finish line has been crossed and it is probably his vast experience of co-driving that is at the origin of this wise philosophy. As the French team draws closer to the world title, there is still a constant reviewing of all aspects of their activities.

Despite being reigning world champions, Audi seems to have been left behind, as though they hadn't been able to adapt to changing circumstances. They haven't won a World Championship round since the 1984 Ivory Coast and even then they couldn't really have failed, given the lack of direct competition.

The Coupé Sport, lighter and more powerful than the A2 Quattro it was brought in to replace, is now out of date. It is no longer really competitive when compared to the purpose built cars of the new generation. It must be admitted that the German manufacturer's policy of basing its car on a top-of-the-range model was very bold and it shouldn't be forgotten that it was a policy that paid off. Until now. The next step will be a difficult one for Audi, their former ideas will need to be thoroughly reviewed. Lancia have understood that, as have Austin Rover, Ford and Porsche who are all currently in the process of preparing their latest Gp B cars.

A new 6-speed gearbox was tried on the Safari, new brake discs were fitted for Corsica and, in Greece, new magnesium shock absorber mounts were being used. None of these solutions managed to put the Audis back in with a chance. They were all simply detail changes which have no direct effect on the intrinsic short-comings of the German car. The basic problem is their slowness to adapt to today's requirements.

Lack of results (and not just a lack of modesty) is possibly also responsible for problems within teams, not to say tension. In Greece, Blomqvist tended to be

Timo Salonen took fastest time on the first stage, 16 seconds ahead of Röhrl and Zanussi and 19 seconds faster than Blomqvist who was already asking for a shock absorber mounting to be changed. Unfortunately, as early as the second stage, the rally lost two of the four main contenders, Röhrl and Vatanen. A shock absorber mounting had broken on the German driver's car which was forced to stop at a spot where the Audi helicopter couldn't land. After giving the problem some thought, the Audi team decided to ask Grissmann, driving an A2 Quattro, to take the spare parts with him on the stage and to drop them off where Röhrl was stranded. At the same time two Audi mechanics set off on foot into the stage. Röhrl, Geistorfer and a Greek mechanic who happened to be around got on with the job of dismantling the offending part and were ready when Grissmann turned up. The repairs were completed just as the two out-of-breath mechanics arrived and the Sport Quattro shot off. At the end of the stage the crew carried on towards Athens. The loss of time had been too great and O.T.L. was inevitable.

Just a few miles further into the same stage, Ari Vatanen's Peugeot 205 Turbo 16 had suddenly gone off the road on a straight section and finished up in a ditch after the steering column had come away from the rack. The Peugeot helicopter dropped off a couple of mechanics not far from the car and the repairs were promptly carried out but, even with the help of the spectators that Terry Harryman had been able to find, it was impossible to get the car back on the road. So the helicopter flew off in search of a cable which it dropped nearby and this enabled the car to get out of the ditch. Vatanen was able to continue but at low speed since an upper shock absorber mounting had broken, the spring of which had caused an oil pipe to split and a fire broke out in the engine. By the time Harryan could get to the flames with the manual extinguisher, the car's automatic system had already put out the fire but the loss of oil had caused damage to the engine and Vatanen was forced to finish the stage even more slowly and in the end, forced to retire.

Now, Blomqvist and Salonen were left to fight it out. The Swedish driver admitted that he had been particularly careful on the first, very rough stages. Afterwards he was able to watch the Finn's times but was not able to worry him and at the end of the first leg, Salonen had a lead of 1m09s over Blomqvist and more than 18m over Ingvar Carlsson who was already third with his Mazda RX7 Gp B. Zanussi had previously held third position before puncturing three times on the same stage and dropping down to eight overall in the Lancia. Later, brake problems made him slip a further three places down the leaderboard but the young Italian was able to climb back up to eighth at Kalambaka, just behind team-mate, Pregliasco, who had been handicapped by the same problems. Mehta, Warmbold and Al Hajri were fourth, fifth and sixth respectively. Grissmann was already out following a split head gasket on his Audi and Jochi Kleint, too, had disappeared with a broken wheel shaft on his VW Golf GTi. Wittmann's similar car was comfortably leading Gp A.

The second leg started badly for Blomqvist. He lost 33 seconds on SS 18 because of injection problems and a further minute was lost on a road section after an apparently precautionary gearbox change had taken longer than expected. A little later, Stig lost 1m13s following the failure of motronic sender which he was forced to change himself during the stage. With a lead of more than three minutes, Salonen was now able to survey the Swedish driver and could afford a slow down on the rougher sections whilst still driving hard wherever possible. Blomqvist's bad luck continued when he was forced to change a broken wheel on SS 32 towards the end of the second leg. Another 4m15s were lost in the process and the rally was almost definitely in Timo Salonen's pocket.

Carlsson had never lost his third place whilst the two Lancia drivers, Pregliasco and Zanussi, each briefly held fourth. The former was slowed by two snapped throttle cables in succession caused him to go O.T.L. At the Lagonissi halt, Mehta was fourth in front of Pregiasco, Warmbold and Al Hajri. There was an interesting fight going on between the Mazda and Porsche drivers for sixth place after Al Hajri had been slowed with a broken rear suspension.

Apart from the obvious nervous tension, the third and last leg of the event was more or less a formality for Timo Salonen who could afford to lose up to 8 seconds a mile to Blomqvist on the rougher sections. His lead over the Audi driver at the finish was 4m15s. Apart from two punctures, Carlsson had had a trouble-free drive and his March finished first at the unofficial two wheel drive category ahead of Mehta and Al Hajri who had managed to get the better of Warmbold. The Nissans of Kirkland and Moshous followed in front of Wittmann who was clear Gp A winner ahead of the Audi 80 Quattro of the fellow German, Stohl. There were 45 crews at the finish and noteworthy performances included Krecek's 13th place in the little Skoda and Gallo's 15th place with his Toyota Corolla. Principal victim of the last night through the Peloponese was Pregliasco whose brake problems sent him into a wall in sight of a time control.

Stig Blomqvist still in the fight for the Drivers' World Championship crown

TEAM BY TEAM

On paper, only two teams seemed to stand any chance of taking overall victory : Peugeot, who had entered two 205 Turbo 16s for Vatanen/Harryman and Salonen/Harjanne, and Audi, with two Sport Quattros for Röhrl/Geistdorfer and Blomqvist/Cederberg. The other main teams present had to be content with competing on a rally within a rally in an effort to be best placed two-wheel drive car. Nissan believed in strength through numbers and five 240 RSs were at the start, three of which were the new evolution 'ET' models for Kirkland/Levitan, Mehta/Mehta and Moshous/Vazakas. The 1984 models were driven by Shah/Doughty and "Stratissino"/Sassalos. Mazda Rally Team (Europe) were making their second World Championship appearance of the year and there two RX7s entered for team manager, Warmbald, and "Biche" and Carlsson/Melander. The Mazdas' engines were a little more powerful than before and, more importantly, the power was more progressive. Of the semi-official teams present, the Rothmans Porsche team and the West Lancia team were perhaps the best equipped. Al Hajri/Spiller representing the former with a 911 SC RS and the latter had entered two Lancia Rallys's for Zanussi/Cresto and Pregliasco/Cianci.

Once again, VW Motorsport had brought along two Golf GTi GP A cars for Kleint/Hohenadel and Wittmann/Ogrisek and main rivals in that category were the Opel Manta of Monaco driver, "Tchine", and the Renault 11 of local hero, "Leonidas". Last but not least, there were a number of official Eastern Block teams comprised of the Rumanian Dacias, the East German Wartburgs and two Skoda 130 LR GP BS for Krecek and Kalnay.

Franz Wittmann "I'm so pleased with my class win. It's the first time a Golf has finished at the Acropolis."

a little fatalistic in his comments, adding that nothing proved that he would be staying with the Ingoldstadt team in 1986. There are other tell-tale signs. Take, for example, the recent press release published on May 27, announcing the renewal of Walter Röhrl's contract with Audi for next year. When quizzed, the German driver said that he wasn't even aware of the press release and he didn't appear to mind saying that he hadn't signed anything! Michèle Mouton, too, is finding it hard to hide a certain bitterness when talking to the press about not competing in the World Championship rounds that were planned at the beginning of the season and, as for Hannu Mikkola, it's been a long time since we've seen him in action. Within the Audi team, they seem to be waiting for their current spell of bad luck to end whilst, at the same time, they are trying to convince the German directors to invest sufficient cash into their new projects. For Roland Gumpert's team the present situation must be demoralising. Perhaps it might be better to mark a pause in order to retrieve the situation. ■

TECHNICAL DATA

32nd Acropolis Rally.
Date: May 27-30, 1985.
6th round of the World Rally Championship for makes and drivers.
Start: Athens; **Finish:** Glyfada.
Route: 2,995.9 km/1,870.5 miles, made up of 47 special stages covering a total of 807.7 km/504.8 miles comprising 738.7/461.6 miles of gravel and 69 km/43.1 miles of asphalt. The Rally was made up of three legs.
1st leg: Athens - Kalambaka, Monday May 27, 825.9 km/516.1 miles, 17 special stages covering a total of 285.7 km/178.5 miles.
2nd leg: Kalambaka - Lagonissi, Tuesday May 28, 756.6 km/472.8 miles, 16 special stages covering a total of 283.4 km/177.1 miles.
3rd leg: Lagonissi - Poros - Glyfada, Wednesday night to Thursday May 30, 15 special stages covering a total of 238.6 km/149.1 miles.
Entries: 116; **Starters:** 110; **Finishers and Classified:** 45.
Weather: Hot and dry with rain on two stages.

PAST RESULTS

1975: Röhrl/Berger (Opel Ascona).
1976: Kallström/Andersson (Datsun 160 J).
1977: Waldegaard/Thorszelius (Ford Escort RS).
1978: Röhrl/Geistdorfer (Fiat 131 Abarth).
1979: Waldegaard/Thorszelius (Ford Escort RS).
1980: Vatanen/Richards (Ford Escort RS).
1981: Vatanen/Richards (Ford Escort RS).
1982: Mouton/Pons (Audi Quattro).
1983: Röhrl/Geistdorfer (Lancia Rally).
1984: Blomqvist/Cederberg (Audi Quattro).

STAGE PERFORMANCES

	1	2	3	4	5	6	A	B
Blomqvist	29	15	—	1	—	—	45	47
Salonen	20	25	1	1	—	—	47	47
Zanussi	—	3	12	4	5	3	27	30
Mehta	—	1	6	6	9	6	28	47
Pregliasco	—	1	3	4	2	4	14	37
Moshous	—	1	—	1	4	7	13	47
Röhrl	—	1	—	—	—	—	1	1
Carlsson	—	—	14	13	10	3	40	47
Al Hajri	—	—	8	13	9	7	37	47
Warmbold	—	—	2	1	5	5	13	47
Kirkland	—	—	—	4	4	8	16	47
Grissmann	—	—	—	—	1	—	1	3
Kleint	—	—	—	—	—	1	1	14

A: Number of placings in first 6
B: Number of special stages covered

MAIN RETIREMENTS

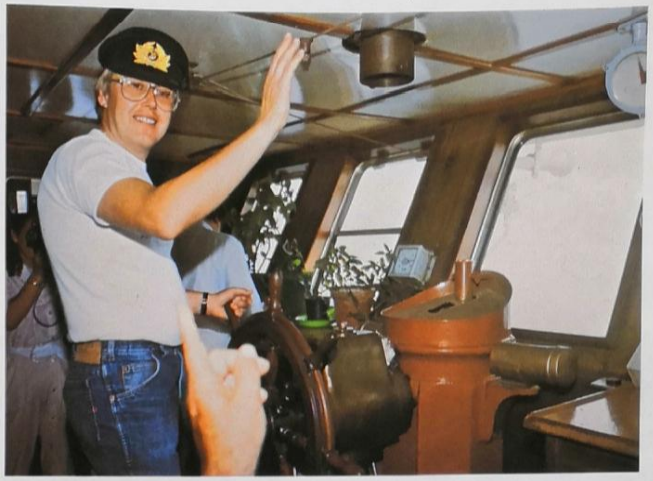
Vatanen/Harryman (Peugeot 205 Turbo 16), steering, SS 2.
Röhrl/Geistdorfer (Audi Sport Quattro), suspension support, SS 2.
"Tchine"/Lejeune (Opel Manta), overhead camshaft, SS 2.
"Leonidas"/Arkentis (Renault 11 Turbo), off, SS 2.
Grissmann/Pattermann (Audi Quattro), head gasket, SS 4.
Kleint/Hohenadel (VW Golf GTi), wheel shaft, SS 15.
Zanussi/Cresto (Lancia Rally), throttle cable, SS 31.
Pregliasco/Cianci (Lancia Rally), off, after SS 37.

FEATURES

Rally:
Because of the elections, the finish was at Glyfada not in the Athens Stadium.
Cars:
First 1985 championship points for VW.
Drivers:
The Swede Ingvar Carlson became number one driver.

RALLY LEADER

SS 1- SS 30 (Finish): Salonen.



DRIVERS' WORLD RALLY CHAMPIONSHIP

(Results after six of eleven rounds: Monte Carlo, Sweden, Portugal, Safari, Corsica and Acropolis.)

1. Salonen	12	+ 12	+ 20	+ 4	—	+ 20	= 68
2. Blomqvist	10	+ 15	+ 10	—	—	+ 15	= 50
3. Vatanen	20	+ 20	—	—	—	—	= 40
4. Röhrl	15	—	+ 12	—	—	—	= 27
5. Saby	8	—	—	—	+ 15	—	= 23
6. Kankkunen	—	—	—	+ 20	—	—	= 20
Ragnotti	—	—	—	—	+ 20	—	= 20
8. Biasion	2	—	+ 15	—	—	—	= 18
9. Kirkland	—	—	—	+ 12	—	+ 4	= 16
10. Waldegaard	—	—	—	+ 15	—	—	= 15
Carlsson	—	+ 3	—	—	—	+ 12	= 15

12. Bernard Béguin (F) 12, 13. Hannu Mikkola (SF), Rauno Aaltonen (SF), Billy Coleman (EIR) and Shekhar Mehta (EAK), 10. 17. Per Eklund (S), Werner Grissmann (A), Erwin Weber (D), Yves Loubet (F) and Saeed Al Hajri (Q) 8, 22. Henri Toivonen (SF), Gunnar Pettersson (S), Jose Miguel (P), Alain Ambrosino (CI), Bertrand Balas (F) and Achim Warmbold (D) 6, 28. Dany Snobeck (F), Mikaël Ericsson (S), Carlos Bica (P), Jean-Paul Bouquet (F) 4, 32. Jean-Claude Andruet (F), Santinho Mendes (P), Yasuhiro Iwase (EAK), Camille Bartoli (F) and George Moshous (GR) 3, 37. Mats Jonsson (S), Jorge Ortigao (P), Ashok Patel (EAK), Jean-Jacques Paoletti (F) and Franz Wittmann (A) 2, 42. Maurice Chomat (F), Kenneth Eriksson (S), Pedro Leite Faria (P), Carlo Vittuli (EAK) and Patrick Bernardini (F) 1 (46 classified drivers).

MAKES' WORLD RALLY CHAMPIONSHIP

(Results after six of eleven rounds: Monte Carlo, Sweden, Portugal, Safari, Corsica, Acropolis).

1. Peugeot	18	+ 18	+ 18	+ 6	+ 16	+ 18	= 94
2. Audi	16	+ 16	+ 14	—	—	+ 16	= 62
3. Nissan	—	—	+ 4	+ 14	—	+ 12	= 30
4. Toyota	—	—	+ 10	+ 18	—	—	= 28
5. Lancia	8	—	+ 16	—	—	—	= 24
Renault	6	—	—	—	+ 18	—	= 24
Porsche	—	—	—	—	+ 14	+ 10	= 24
8. Mazda	—	+ 6	—	—	—	+ 14	= 20
9. Opel	—	+ 4	—	+ 12	—	—	= 16
10. Alfa Romeo	—	—	—	—	14	—	= 14
11. BMW	—	—	—	—	9	—	= 9
Subaru	—	—	—	+ 9	—	—	= 9
13. Ford	—	—	+ 8	—	—	—	= 8
Talbot	—	—	—	—	+ 8	—	= 8
15. Citroën	4	—	—	—	—	—	= 4

FOR THE RECORD

As in Corsica, one team led throughout the Rally only this time it was Salonen/Harjanne.

FINAL RESULTS

1. Salonen/Harjanne (Peugeot 205 T16) 10 hours 20m 19s (1st Group B). 2. Blomqvist/Cederberg (Audi Quattro Sport) 10 hours 24m 34s. 3. Carlsson/Melander (Mazda RX 7) 11 hours 8m 25s. 4. Mehta/Mehta (Nissan 240 RS) 11 hours 10m 46s. 5. Harji/Spiller (Porsche 911) 11 hours 21m 50s. 6 Warmbold/Biche (Mazda RX 7) 11 hours 25m 16s. 7. Kirkland/Levitan (Nissan 240 RS) 11 hours 27m 51s. 8. Moshous/Vazakas (Nissan 240 RS) 11 hours 45m 52s. **9. Wittman/Ogrisek (VW Golf GTi) 12 hours 6m 35s (1st Group A).** 10. Stratissino/Sassalds (Nissan 240 RS) 12 hours 15m 53s. 11. Stohl/Seisenbacher (Audi 80 Quattro) 12 hours 21m 41s. 12. Moshoutis/Silef (Ford Escort RS) 12 hours 26m 35s. 13. Krecek/Matl (Skoda S 130 LR) 12 hours 42m 01s. 14. Shah/Doughty (Nissan 240 RS) 12 hours 42m 19s. 15. Gallo/Vassiliadis (Toyota Corolla GT) 12 hours 44m 32s. 16. Shibagaki/Jukana (Toyota Corolla) 13 hours 02m 02s. 17. Athanassoulas/Panou (Toyota Starlet) 13 hours 12m 09s. 18. Tsobanopoulos/Tsolakis (Opel Ascona) 13 hours 21m 28s. 19. Makris/Karatzanis (Toyota Starlet) 13 hours 23m 06s. 20. Panourgias/Smailis (Renault C 375) 13 hours 26m 31s. 21. Pesmazoglou/Fertakis (Opel Ascona 400) 13 hours 26m 59s. 22. Waelti/Lasserre (Opel Ascona I) 13 hours 29m 40s. 23. Kritsikis/Egglezos (Toyota TE 71) 13 hours 30m 37s. 24. Vittadini/Mollica (Ford Escort RS) 13 hours 33m 27s. 25. Vasile/Scobai (Dacia 1310) 13 hours 41m 52s. 26. Kassidopoulos/Hassapis (Toyota Starlet) 13 hours 42m 34s. 27. Lambropoulos/Vasiliadis (Toyota Starlet) 13 hours 42m 35s. 28. M. Meylan/E.E. Bertozzi (Nissan 240 RS) 13 hours 43m 14s. 29. Valentis/Psihoyios (Lada VFTS) 13 hours 57m 52s. 30. Giagnissis/Keratzakis (Toyota Starlet) 13 hours 58m 24s. 31. Zele/Maigret (Peugeot 505 Turbo) 14 hours 14m 25s. 32. Kruegel/Schenk (Warburg 353 M) 14 hours 15m 57s. 33. Mayer/Klement (Talbot Samba Rally) 14 hours 17m 18s. 34. Loukas/Papageorghiou (Toyota Starlet) 14 hours 18m 08s. 35. Grigoras/Sanga (Dacia 1310) 14 hours 18m 22s. 36. Oimotakis/Athanassious (Toyota Starlet) 14 hours 19m 35s. 37. Ordea/R. Dobrin (Dacia 1310) 14 hours 21m 03s. 38. Tsapalos/Polito (Nissan HA 13) 14 hours 22m 35s. 39. Heinbuerger/Bruchman (Wartburg 353 W) 14 hours 35m 24s. 40. Tsadaris/Kafaoglou (Lada 2105) 14 hours 38m 45s. 41. Papadamadiou/Raftoyiannis (Toyota Starlet) 14 hours 41m 16s. 42. **Klein/Witzmann (Toyota) 14 hours 55m 08s (1st Group N).** 43. Papadopoulos/Yianis (Citröen Visa BT) 15 hours 03m 10s. 44. Egglezos/Kiouranis (Datsun Sunny Pick) 15 hours 35m 14s. 45. Egglezos/S. Stelios (Toyota Starlet) 15 hours 47m 26s.

Saeed Al Hajri (Rothmans Porsche 911) DPPI

HAJRI'S FOURTH PLACE WAS THE MIDDLE EAST CHAMPION'S BEST RESULT IN THE WORLD SERIES SO FAR

Mauro Pregliasco (Lancia 037 West) DPPI

NEITHER PREGLIASCO NOR ZANUSSI MADE THE FINISH, THEIR LANCIAS SUCCUMBING TO A NUMBER OF PROBLEMS IN GREECE

Ingvar Carlsson (Mazda RX7) André Marzoli

A FINE RESULT FOR THE MAZDA TEAM WHICH MEANS THAT CARLSSON IS NOW AN "A" SEEDED DRIVER

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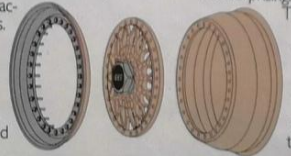

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GRAND PRIX

FORMULA 1 POWERBOAT WORLD SERIES

by Zoe Trumper Photos Pro One

TOO GOOD TO BE TRUE

The Formula 1 circuit powerboat season did start out rather too perfectly. Even the weather decided to support this new and dynamic image which promotions company Pro 1 has instilled into water-borne motor racing: clear skys and brilliant sunshine brought the crowds in their thousands to the Munich Grand Prix.

What spectators saw in this first example of abandoning 3 sprint heats in favour of a 30 to 45 minute Grand Prix was some of the closest racing to be witnessed in Formula 1 powerboats for many years. And there could not be a driver more deserving of victory than Englishman Bob Spalding. 5th driver to take over the lead and only then on the final lap, Spalding also scored a point for the new safety cockpit, thought by some to handicap a driver.

Cause for celebration indeed. Until Stockholm. The bitter winds and driving rain 2 weeks after the German event were warning enough that the Swedish Grand Prix would not follow in the footsteps of Munich. But the near-catastrophe that did occur could never have been forseen.

A weakness in the casting of the outboard centre sections, the piece that holds the motor to the boat and gear case to the power head, caused motors to break away on 3 boats at top speed. What could have happened doesn't bear contemplation. What actually happened brought the race to a halt and 3 shaken but unharmed drivers were towed to the pits, 2 still with engines hanging on by the steering cables, one 25,000 dollar V8 somewhere on the bottom of Stockholm's inner harbour and outboard marine corporation, producers of the Johnson and Evinrude motors, vowed immediately to have each engine equipped with a new and improved centre section in time for the Chattanooga Grand Prix 2 weeks hence.

Their subsequent quick reaction in casting a new model and testing it to two and a half times the original product's strength can not be faulted. But would it have happened at all if OMC did not enjoy an entire monopoly in Formula 1? Few drivers would have had any hesitation in changing equipment if there was a rival Formula 1 motor available after such a traumatic experience, a fact that OMC must be aware of and can relax with in the knowledge that there is no competition to contend with at present.

It becomes clearer every day that the long term success of Formula 1 circuit power boat racing depends upon the entry of other motor manufacturers and the sooner it happens the better for (nearly) everyone concerned.

PIT TALK

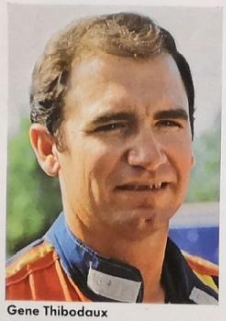
Docks for Durban Grand Prix, Gene Thibodaux defends himself, Powerboat '85 annual and more in this month's Pit Talk section

ROUNDS ONE AND TWO OF THE FORMULA ONE POWERBOAT SERIES

Zoë Trumper went to Munich and Stockholm to find out what happened at the first two opening rounds of this year's championship.

TOGETHERNESS

Considerable criticism has been levelled at American driver Gene Thibodaux regarding his position as OMC's only official test driver for the new Johnson and Evinrude V8 outboards. Few teams received their motors much more than a fortnight before the first Grand Prix and hence had little chance to become accustomed to the new features such as the c.f.i. (computerised fuel injection). As these 3.5 litre two-stroke motors are presently the only motor homologated for Formula One, it has been suggested it creates an injust situation having Thibodaux test the motors ever since October.



Gene Thibodaux

Thibodaux had no hesitation in defending himself. "*If people had been out in Florida in October when the test programme started, and saw the amount of times we'd back the boat into the water, go a hundred yards and have to be towed in because the motor broke,*" the Texan drawled, "*they'd be glad it was me and not them! It is only in the last six weeks that it has begun to come together,*" continued Thibodaux, "*but even those six weeks have not given me much advantage — our test boat is so different from this one I have had to adjust to a totally new style of handling.*" The talented American adjusted rapidly; he had a little difficulty in holding the lead for thirty of the fifty laps in Munich.

IN THE DOCK

It looks highly likely that the South African Grand Prix, scheduled for November 10th, will switch venues from Johannesburg to Durban. "*The city of Durban has always been keen to hold a motor racing Grand Prix in their streets,*" explained Tony Heaton of Idea Marketing, promoters of the South African event, "*and they put a considerable sum of money aside in the hope that it would happen. When the plan fell through, they were only too happy to hear from us and are providing us with substantial support to stage an event in the docks.*"

Some drivers are sceptical, knowing that dock races are generally very rough, and this one had the added disadvantage of being on salt water, the rusting effects of which are difficult to avoid. "*The first thing that has to happen is to get a driver down there with a boat,*" said Heaton, "*and then we can make a decision.*"

SHORTSIGHTED

Barry Woods

There was no doubt about whom American Barry Woods felt had the best chance to win the opening round in the Champion Spark Plug World Series in Munich. "*I used to have to run to catch Molinari,*" said the Nordica team driver, "*but now he's retired, there's no one to catch!*" What do you say to that, Spalding?!

YEARBOOK

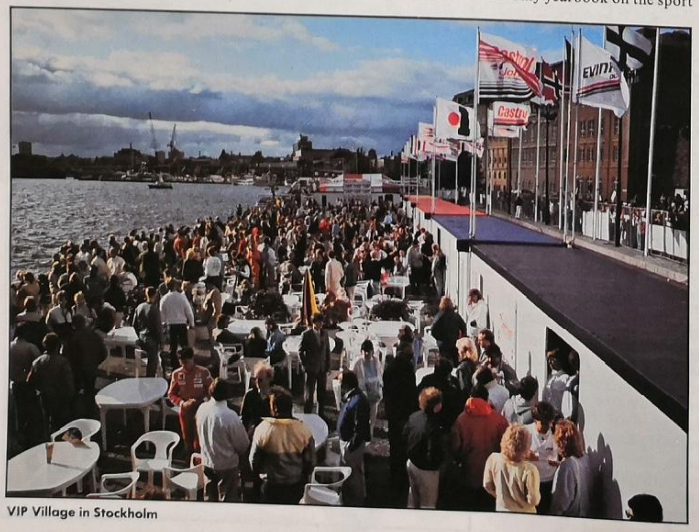
Whether you think you know it all, you'd like to learn, or perhaps there's a fact that is eluding you, Powerboat '85 is a must. The only yearbook on the sport of circuit powerboat racing and filled with dramatic and exciting colour photography, it is published by Performance Publications at £5.95 and is available from P.O. Box 83, Pulborough, West Sussex, RH20 1YX, U.K.

LIFE LINE

An amusing problem reared its head for the first time in Stockholm for the users of the new safety cockpits. As with any innovation, it takes a while for rules to catch up and the subject of 'kill switches' slipped through the net when rules were updated during the winter to accomodate the reinforced structures. If a driver is to be thrown clear of his boat in the event of an accident, a plug on the end of a string attached to his lifejacket is all that is required as an engine cut-out. Now that the majority of drivers are strapped in, the old system is clearly useless and designers have built in an automatic system activated by the angle of the boat. Scrutineers at the Stockholm Grand Prix, however, were unable to complete satisfactory reports because the rules still demand that a kill switch is attached to the driver's person. In order to avoid any chance of being protested out of the race, drivers were forced to attach string to the on/off switch installed in the cockpit — and the scrutineers were satisfied!

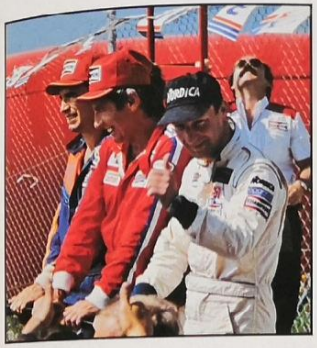
BAD RECEPTION

The use of radios in Formula One boats was banned by the U.I.M. just prior to the Stockholm Grand Prix at the request of the four-man drivers' commission. The reasons given were that they could be used by team managers to instruct their drivers to block another boat, that they could distract the driver and that there was a risk of them interfering with communication systems of rescue and race organisation personnel. Against that, Bob Thompson, team manager of the 'All American Racing Team' of Thibodaux and Robertson, pointed out that they were used in Indianapolis at 250 mph without harmful effect. "*I can't help thinking this is a step backward,*" said the one-time driver, "*I have never used radios for anything other than the safety of my drivers to warn them of impending danger. What are they going to do next, rule against these wing mirrors we're experimenting with?*"

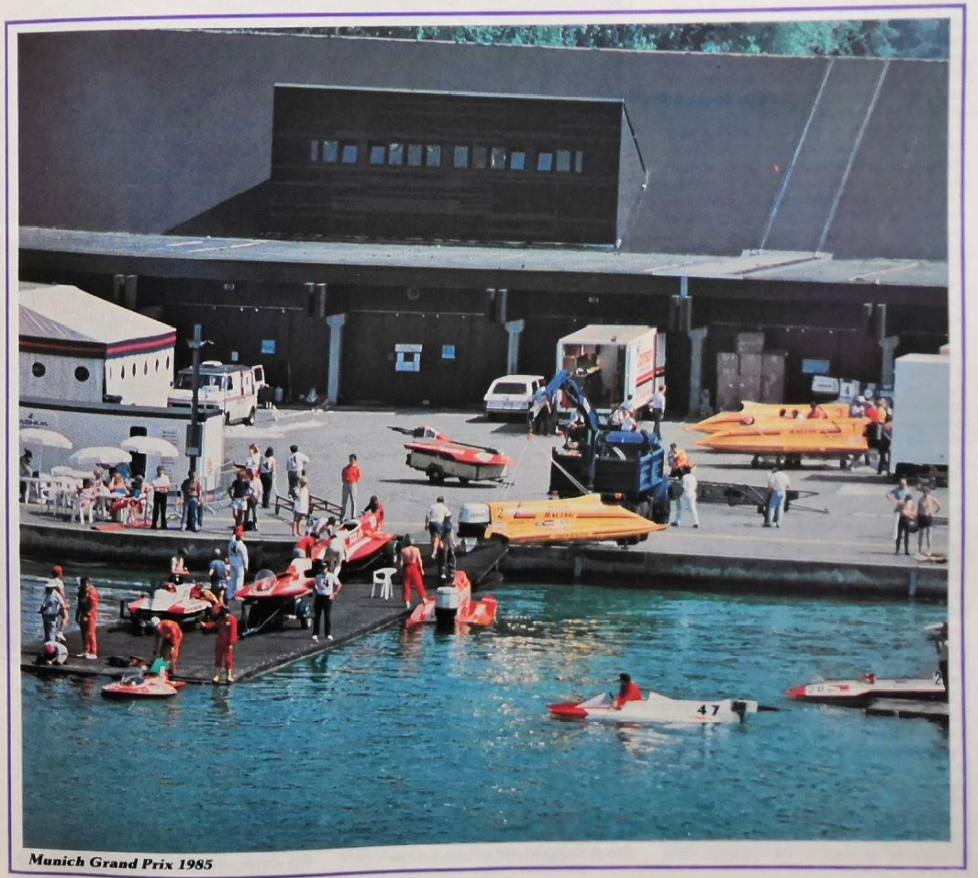


VIP Village in Stockholm

CHAMPERS FOR BOB



BOB SPALDING A WINNER? FIVE YEARS AGO, MOST CERTAINLY, BUT THERE WERE DOUBTS THAT THE IPSWICH DRIVER, 44, WOULD AGAIN RETURN TO THE WINNERS' CIRCLE. YET HE GAVE A PERFORMANCE REMINISCENT OF YEARS PAST AS HE FORCED HIS WAY TO THE HEAD OF THE MOST COMPETITIVE FIELD SEEN IN A LONG TIME, TO CLAIM THE FIRST NINE POINTS OF THE SEASON AT THE MUNICH GRAND PRIX.



Munich Grand Prix 1985

"*It's a whole new ball game,*" mused Barry Woods as he looked around the sun-soaked pits in Munich, "*the atmosphere is different, and most of that is to do with Renato Molinari. He was the one to catch, and now he's retired, so there's no one left to catch anymore. You never know, though,*" grinned the American who is racing for the retired World Champion this year, "*perhaps there's a new Molinari out there*"!

The atmosphere was certainly different — it was also healthier. When practice began on the 1.6 km course it was no longer a foregone conclusion that Italian Molinari would log the fastest times — he was firmly on the score and the six fastest boats proved to be within 1.7 seconds of each other in time trials.

The significant part about that, however, was that those times were as much as four seconds slower than last year, and the water on this hot and windless Saturday could never be compared to the whipped-up mass of whitecaps that drivers had been forced to encounter here during the 84 Grand Prix.

"*Oh, give me last year's set-up,*" moaned Woods, as he wandered back to the Nordica camp after setting the fastest time in unofficial practice on Saturday morning, "*and I'll show you some good times.*" Unfortunately for the American, last year's "set-up" had been outlawed in the shake up of rules which had set new minimum weights and lengths of boats, and it was this that was slowing the overall speeds and providing such tight competition.

Nevertheless, Woods forced his Nordica Molinari craft into pole position with an average speed of 154.672 kph, lopping off with ease a second and a half from his initial test times to record 37.24.

For a long while, as the thirteen other V8 powered catamarans took their three laps around the 1.6 km course in ideal conditions, Frenchman François Salabert held on to the second slot with a 38.16 official time, but as time began to run out, Bob Spalding's Hodges Evinrude was craned back into the water after some frantic engine work.

He had been towed off the course after grinding to halt in his first attempts to set official times, but it proved only to have been two wires touching and shorting out the 3.5 litre Evinrude outboard, and the Englishman was amongst the last to record a time.

A hundred stopwatches recorded him from the pontoon on what seemed to be a couple of average laps, and it had to be confirmed from the official scorers before the team could believe he had logged in less than half a second behind Woods — already the best performance Spalding had shown in many a Grand Prix.

The only driver who automatically had been assumed would challenge Woods was suffering frustrating intermittent electrical cut-outs. "*Why is it that I can test at home and everything goes well,*" questioned Dutchman Cees van der Velden, hiding his frustration behind dark glasses, "*and I come here and I can't even complete a lap?*" The Benson and Hedges manager and one of three drivers in the tobacco company's team was not able to concentrate solely on his own worries either. In his capacity as unofficial team manager for the two new South Africans, Peter Lindenberg and Fred Steinberg, having supplied them both with boats, van der Velden had the responsibility of ensuring they were adequately prepared for the race, and watching them during practice in order to offer advice.

The electrical problem was solved for the Dutchman, runner-up in last year's World Championship, but a doubtful gearcase and two sick powerheads later, it was clear to see the race favourite would have to wait for the next Grand Prix to make his mark.

Meanwhile, the weather remained hot and still as Sunday rolled inexorably towards 3 pm, testing was over, drivers lounged by team campers with overalls stripped to the waist, mechanics tinkered and double-checked equipment, the sound of people filling up the spectator aera drifted over the water.

Suddenly, the cranes were in operation, the sleek-looking boats were lowered to the water one by one and drivers pulled on gloves and helmets, fastened lifejackets and stepped into the tight-fitting cockpits. Those equipped with the new reinforced cockpits, eight in all, strapped themselves in with the six-point harnesses new to powerboat racing and joined the old-style boats on their warm-up laps, before forming a line that looked straight up the course, Woods holding the pole position on the outside place with its debatable advantages.

The red light was on and the whine of priming filled the air when suddenly the atmosphere was broken by the roar of eleven V8s breaking into life and screaming down the course towards the first turn-buoy, the remaining three new drivers following a rapid five seconds later.

Pole position did Woods no good whatsoever. The American limped in, a mere half lap completed, after throwing a blade off his propeller. The Nordica driver returned six laps later, but there was never a chance for him to make up the lost ground in fifty laps.

A compatriot of his had taken over the lead : Ben Robertson, a talented thirty year old struggling to keep Dutchman Arthur Mostert at bay who was followed in turn by Robertson's Nigrin team-mate Gene Thibodaux and Mostert's Benson and Hedges partner Salabert as they battled into the seventh lap.

Even as Robertson spun-out, his anti-torque steering having locked as he turned, the new positions were reduced to confusion. Not one but two of the Benson and Hedges boats lost their rear cowlings. They had dislodged slightly and the wind had torn into the gap and plucked them off, race number and all.

"*I could feel something happening,*" said the wiry Mostert, 35, "*but with the head protection on the new cockpits I had no way of seeing behind me. I couldn't be sure of what happened,*" the Dutch driver continued, "*until they black flagged me off the course.*"

Enrico Vidoli (Nordica) No 19

Rick Frost No 6

Gene Thibodaux (Texaco Team) No 5

Mostert and Salabert defended first and third positions until they were both black flagged off. "*It felt so easy,*" sighed Mostert in disappointment, "*I was catching on Robertson even before he was out and I still had speed to spare.*" The only consolation for either driver was that it showed them what could be achieved later in the season.

Meanwhile, just ten drivers were still on the water, and the way was clear ahead of Thibodaux, the American leader having to fight off an insistent Enrico Vidoli for thirty laps. It has always been thought that the young Italian had been held back by his previous team-mate Molinari but now there was no such restraint and his Molinari catamaran was flying high as he inexorably narrowed the gap to the American leader. And as Vidoli forged past on the 46th lap it seemed the race had been won.

In fact, Spalding had decided one lap earlier it was time for him to move. "*I felt confident with the boat,*" explained the 1980 World Champion, "*and I knew I had some speed left, so it was worth a try.*"

The Englishman had been lying in a solid and comfortable third place ever since the 9th lap, by the 48th he had edged past Thibodaux and even as they went into the last lap, Spalding was running neck and neck with young Vidoli. The two drivers flung their boats at the final turn-buoy, Spalding shot round on the inside line and streamed past the chequered flag a mere two seconds ahead of the Italian.

It was more than just a victory for Spalding himself. It was his team manager Chris Hodges's first ever Formula One win, and it was a moral victory for the controversial safety cockpit with which Spalding's and seven other boats in Munich were equipped. "*We proved to the sceptics that a boat with the "safety capsule" can be just as competitive (it's certainly no heavier) as the old style catamarans,*" grinned Spalding, still wiping the victory champagne from his face, "*and that is as important to me now as the victory itself.*" And the veteran driver fell silent for a minute as he remembered that it was because his long-time racing partner Tom Percival had been killed that the cockpit project had been instigated at all. "*In a way, this was for Tom,*" agreed Spalding, "*he didn't die for nothing.*"

The Percival Hodges Team had still more reason to feel satisfied. Spalding's partner Bertil Wik, fresh from a short but successful Formula Two career, had shown a stunning performance, battling his way into fourth place by the 17th lap, and holding it until his gearcase sheared off and he was forced to retire on the 46th lap.

Celebrations continued far into the night for the English driver, for Vidoli and Thibodaux, and for a sport that had been rescued from insignificance in style! ■

FINAL RESULTS

1. Percival Hodges (Pro 1 Hodges/Evinrude) Bob Spalding / GB	35m 15.02s
2. Team Nordica (Molinari Evinrude) Enrico Vidoli / I	35m 17.09s
3. Nigrin Racing Team (Molinari/Johnson) Gene Thibodaux / USA	35m 20.10s
4. Denim Racing Team (Velden/Johnson) Rick Frost / GB	35m 28.57s
5. Nashua Racing Team (Burgess/Evinrude) Andy Bullen / GB	35m 22.98s
6. Nashua Racing Team (Burgess/Evinrude) Mark Rothermel / CND	35m 15.66s
7. Diners Club (Velden/Johnson) Peter Lindenberg / D	35m 47.11s
8. Team Nordica (Molinari/Evinrude) Barry Woods / USA	35m 26.59s
NOT CLASSIFIED	
9. Percival Hodges Rc (Pro 1 Hodges/Evinrude) Bertil Wik / S	33m 01.28s
10. Gold Racing Team (Velden/Johnson) François Salabert / F	33m 49.34s
11. Gold Racing Team (Velden/Johnson) Cees van der Velden / NL	36m 18.52s
12. Nigrin Racing Team (Molinari/Evinrude) Ben Robertson / USA	35m 51.69s
13. Gold Racing Team (Velden/Johnson) Arthur Mostert / NL	7m 11.15s
14. United Pools Racing Team (Velden/Johnson) Fred Steinberg /D	8m 19.39s

Race distance : 49 laps or 78.4 km/49 miles.

TROUBLE ON THE WATER

ENRICO VIDOLI SAVOURED HIS FIRST SWEET TASTE OF F1 VICTORY ON THE TURBULENT AND DEMANDING WATERS OF THE STOCKHOLM GRAND PRIX, THE THIN AND INTENSE ITALIAN DRIVING THE BEST RACE HIS TEAM HAVE EVER SEEN OF HIM.

Milk instead of honey on the podium? Well, Formula One boat racers always did have to be different... Italian Nordica driver Enrico Vidoli, Winner of the Stockholm Grand Prix, entered into the spirit of the gesture on behalf of Arla, the Swedish milk board and a new sponsor in the sport, tipped his head back and drank to his victory from a metal urn. As for the second placed Benson and Hedges driver François Salabert, he made up for the champagne by spraying his milk over the crowd of cameramen and journalists...

But it was the third placed competitor in one of the roughest races Formula One drivers have participated in to whom the local camera crews turned. Young Swede Bertil Wik had defended his position from the field of highly experienced competitors to hold third place behind Vidoli and Salabert when the Grand Prix was stopped on the twenty-second of fifty laps.

The Grand Prix, planned for a 6.50 pm start by order of the authorities who would not allow the busy tourist traffic thruway to be closed any earlier, looked to be in severe jeopardy half and hour prior to the start, gusting winds whipping the water into a choppy maelstrom. The decision was taken to postpone by an hour and to reduce the number of laps to thirty, and when Barry Woods and twice winner of the Stockholm event Cees Van de Velden took their craft onto the course at 7.30, they judged conditions to have calmed enough for the race to go ahead.

It was the right decision, but fifteen of the powerful racing machines screaming down the course soon churned the water into an angry mass of whitecaps. Lap speeds reduced significantly as drivers grappled to control their skitterish craft.

"Boy, was it rough out there..." grinned Barry Woods who had ousted Dutchman Arthur Mostert from his early lead on the sixth lap. The American needed every ounce of energy to hold his Molinari Catamaran on the water, which had already been split in testing and subsequently repaired earlier in the weekend, and to keep the Dutchman at bay.

But the pounding was to take its toll. Suddenly, as the leader of the pack forged into the eleventh lap, his boat veered to one side and zig-zagged to a halt, the engine lying at a crazy angle on the boat deck and attached by steering cables alone.

Woods's team-mate Vidoli had already carved a path past the two Benson and Hedges boats of Salabert and Mostert and the Italian was in place to take over the head of the pack, with Wik, Spalding and Thibodeaux moving up to fourth, fifth, and sixth respectively. Four laps later, onlookers could hardly believe their eyes when Canadian Mark Rothermel's Nashua Burgess went through identical antics to Woods and ground to a halt on the course, V8 engine hanging uselessly from the back. There was a distinct feeling that the race was getting out of control. Something was going on that could not yet be identified.

The usual cause of engines breaking off in the past has been weak boat transoms, but then Arthur Mostert shot off the course whilst trying to turn, sending the entire engine fifty feet into the air and himself heading straight for the wall and spectators.

"I have never felt so certain that my time had come as when I was heading for the wall at 100 mph," said the wiry Dutchman. *"I had absolutely no control over the steering anymore, and in those split seconds I know that the only reason I would survive if I hit the wall was because I was in a safety cockpit."* Incredibly, the boat steered to one side and came to a halt without damage alongside the wall.

Both Nordica and Benson and Hedges team managers Renato Molinari and Cees Van der Velden were watching close to where Mostert made his dramatic arrival at the wall. It took the two experts a couple of seconds to see that it was not the boat transom that was breaking under the strain, but the engine centre section itself which attached the motor to the boat. And with every driver using the one engine type it seemed highly likely that the same could happen any moment with any or all of the boats on the water. The race was stopped as soon as race officials could be made to understand the potential gravity of the situation.

Eleven drivers did complete the twenty-two laps and as enough laps had been completed to allow the race results to count for UIM points Bob Spalding, Ben Robertson and Gene Thibodaux received points for fourth, fifth and sixth respectively.

Drivers' reaction to the clear inferior engine centre section ranged from nonchalance to shock and outrage. Those competing in cockpits in particular, felt horror at what could almost inevitably have happened had one of them flipped and relied on the engine to remain on the boat and act as ballast to tip them above water level. But nobody could have been more apalled than the representatives of outboard marine corporation, the manufacturers of the Johnson and Evinrude V8 engines. Within half an hour of the race, Jack Leek, manager of the high performance division, was on the 'phone to the American factory with descriptions of what had broken. By the following Thursday, new patterns had been made to re-cast the entire midsection and testing had already proved they could not produce a piece two and a half times stronger than the first product.

"We shall be equipping every Formula One driver with a new and stronger centre section in time for Chattanooga," confirmed Leek, referring to the race scheduled just two weeks after Stockholm. But who had gone wrong in allowing such a potentially dangerous product to be used in the first place?

"We ran four engines in Endurance tests for ten hours before releasing the new V8s," pointed out Leek, *"even before we took them to the parker seven hour race and ran for about four hours there. With that behind us, it seemed the engine and all its fittings were entirely adequate for races that did not even last an hour."*

Gary Gabrecht, managing director of Second Effort, the Florida-based company constructing and selling the motors as OMC's sole V8 dealers, confirmed the limited value of testing. *"We could have put a hundred hours on one of these motors, go to the first race and see it break,"* said the American.

Drivers were asking in Stockholm that they revert to the 1984 cowlings until a new centre section could be throroughly tested, but that raises the engines by 8" to their former height, which is thought to have contributed to the lack of stability and resulting accidents last year. It remains to be seen whether OMC will succeed in restoring drivers' faith in them and their products in time for the Chattanooga Grand Prix on 23rd June. ■

Ben Robertson (USA).
Scruteneering.
Marc Rotharmel with Gene Thibodaux.

FORMULA ONE POWERBOAT WORLD CHAMPIONSHIP POINTS
(Results after two rounds)

No	DRIVER/TEAM	BOAT	POINTS
19	Enrico Vidoli (I) Nordica Team	Molinari/ Evinrude	15
12	Bob Spalding (UK) Arla Milk	Hodges/ Evinrude	12
3	François Salabert (F) Benson and Hedges	Velden/ Johnson	6
5	Gene Thibodeaux (USA) Texaco Team	Molinari/ Johnson	5
12	Bertil Wik (S) Arla Milk	Hodges/ Evinrude	4
6	Rick Frost (UK) Vag-Denim	Burgess/ Johnson	3
16	Andy Bullen (UK) Nashua Team	Burgess/ Johnson	2
15	Mark Rotharmel (CAN)	Burgess/ Johnson	1

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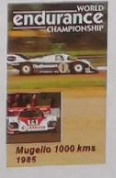

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BEHIND THE SCENES

by Nevin Hickmet

Grand Prix International decided it was time the mechanics were brought into the limelight. After all, where would the drivers be if they couldn't rely on a first-rate outfit? We spoke to the youngest member of some of the teams to find out for you just how they'd joined the F1 circus and their respective teams. None of them consider the long hours of hard work unfavourably. They all devote their skills in a team effort to provide their driver(s) with the best possible cars to achieve the kind of success they deserve.

ZAKSPEED

Name: Dieter Krombein; Age 22

Dieter joined Zakspeed thanks to his brother who was already on the team and he'd also done a four-year apprenticeship. When we asked him what he enjoyed most about his job, he grinned, *"The cars!"* He has been with Zakspeed since Estoril. There is a total staff of 40 people working for Erich Zakowski's outfit and the team's other activities include racing 2 Group Cs and Indycars in the States which means that in the two months he's been with the team he's only had a couple of days off.

RENAULT

Name: Michel Rafaelli; Age 21

Michel used to live near the Paul Ricard circuit in the South of France. He was often around when F1 teams came for private testing and he would make himself useful. Renault built their own test centre on the track recently and he'd help out, stop watch in hand. *"There wasn't a job as such for a time keeper until Renault decided they needed someone two months ago and asked me if I would take on the job. Of course I jumped at the chance and I've been with the team since Estoril now."* His job entails installing photo electric cells on various parts of a particular track and recording the exact speeds of the cars. *"I spend a great deal of time in the evenings calculating and making sure I've got all the figures correct. But, before this season's over, the information will be computerised."*

TOLEMAN

Name: John Walton; Age 27

John Walton has been with Toleman since 1981. He did an apprenticeship and then went straight into Formula Ford where he learned some of the ins and outs to motor racing. From there he joined a F3 team. And then worked on both Formula Atlantic and Saloon car racing outfits before his first F1 experience with Theodore. John's advice to would-be F1 mechanics: *"Be prepared to work long hours! None of us have a particular job, we all contribute to the building of the cars."*

ARROWS

Name: Peter Ford; Age 30

Yes, the youngest mechanic on the Arrows team is thirty and hails from Daventry. He was formerly with Shadow and has been with the team since Brazil. *"Arrows had a position on the T car and I had fabricating skills, but what's really important is being in the right place at the right time. I enjoy the variety most of all. The worst part is the waiting around in the airports."* With an average of two GPs a month Peter gets approximately four days off over the same period but reckons its well worth all the effort.

RAM

Name: Mike Sopp; Age 21

Mike joined RAM one month ago and so Belgium was to have been his first Grand Prix. He wrote a letter to RAM last year offering his services and a few months ago he was informed that there was a vacancy available if he still wanted it. *"I started out helping friends on club circuits and I also did a four-year apprenticeship. There's no dogsbody on the team. We're all involved in building the engines."*

LOTUS

Name: Richard Hodgson; Age 24

Ex-helicopter technician, Richard joined Lotus six months ago and originally comes from North Yorkshire. He spent last year doing saloon car racing with BMW Great Britain and when they withdrew their sponsorship he was left without a job. *"I went knocking on a few doors and wrote a number of letters. Lotus were good enough to give me an interview. They took me on as a mechanic for the test team and they took me along to the GPs to help out."* What does he enjoy? *"The travelling and the best thing was winning at Estoril this year!"* Advice to readers? *"Get a good apprenticeship first and a good CV. Then it's a matter of being there when a vacancy becomes available."*

OSELLA

Name: Carlo Lunetta; Age 25

A home GP at Imola was Carlo's first experience on the F1 circuits. He worked his way up through the ranks of F3 working for the Arno Racing Team with the likes of Paolo Giangrossi and Fabio Mencini. He joined Osella when he heard there was a position available on the T car. What he enjoys most is the immense challenge and the possibility he has of furthering his experience in high level automobile technology on a team such as Osella.

WILLIAMS

Name: Steve Howlings; Age 19

Steve has been with Frank Williams's team for five months and his job entails looking after the bodywork of the cars, he repairs them, places the stickers and generally makes sure they're spick and span. *"I was really lucky because I'd grown up in a world of cars. My father was a great influence in that he used to compete in club events and take me along and I learned quite a bit. Although I hadn't done an apprenticeship, I contacted Williams who, at the time, hadn't a vacancy for a mechanic but they needed someone for the bodywork."* A suggestion on where to start? *"Working on the trucks and generally helping out is a good way."* The advantages? *"Travelling. How else could I see so many countries and get paid at the same time?"* The drawbacks? *"Very little time at home. But it's definitely worth it. The mechanics have been on this team for an average of four years which is rare in F1 and proves that we're generally a happy lot!"*

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POST BAG

OVER THE MOON

Dear GPI,
NEXT THING TO BEING THERE! That is my feeling whenever I cuddle up and read your publication. It's interesting, refreshing, superbly done, novel, with just totally incredible coverage of F1 racing. The coverage literature IS literature. It is a picture of thoroughness, accuracy and dramas behind the scenes of each team. The statistics are THE standards other publications (especially in the US) still have to shoot for. I marvel at the detail in which you cover the teams. Please keep this up.
Without sacrificing F1 coverage, I also enjoy the WEC and Rally scene. They give me perspective and wider scope to really have an appreciation of the total motorsport picture worldwide.
Not everything is perfect though. I would also like to know more about the drivers, some details of their personal and public lives. I would also be interested on how the contracts of the teams with their sponsors are spelled out and negociated. I want THE COMPLETE STORY.
More power to you! Keep up the excellent work! And more!
José R. Casas,
32 Stature Drive,
Newark, DE 19713,
USA

PROFILES

Dear GPI,
Your magazine is as good as ever but how about some more driver profiles?
Rob Cope,
Summerhill,
Jurby,
Isle of Man

Ask and your wish shall be granted! As from this issue, and every month, Mike Doodson now back on the GPI production team, will be profiling your favourite drivers and personalities on the F1 circuits. Senna to kick off!
Thanks for writing in.
Happy reading.
GPI.

INTERNATIONAL

Dear GPI,
Hello from Canada. Your format is a welcome sight on the newsstands over here. It's great to see you include Rallying and Endurance reports. Competition coverage is very thin (and 2-3 months late) in 99 % of North American magazines. So to us Canadians, your mag is still very specialised, even with your expansion to other classes of racing.
To give your lucky European readers some idea, we have only had the complete GP season televised for the last two years (CBC).
Regarding some of the (negative) comments other readers have made concerning competition coverage other than F1, I say b...s! Your last name is still, thankfully, International.
Stephan Carmichael,
Toronto,
Canada

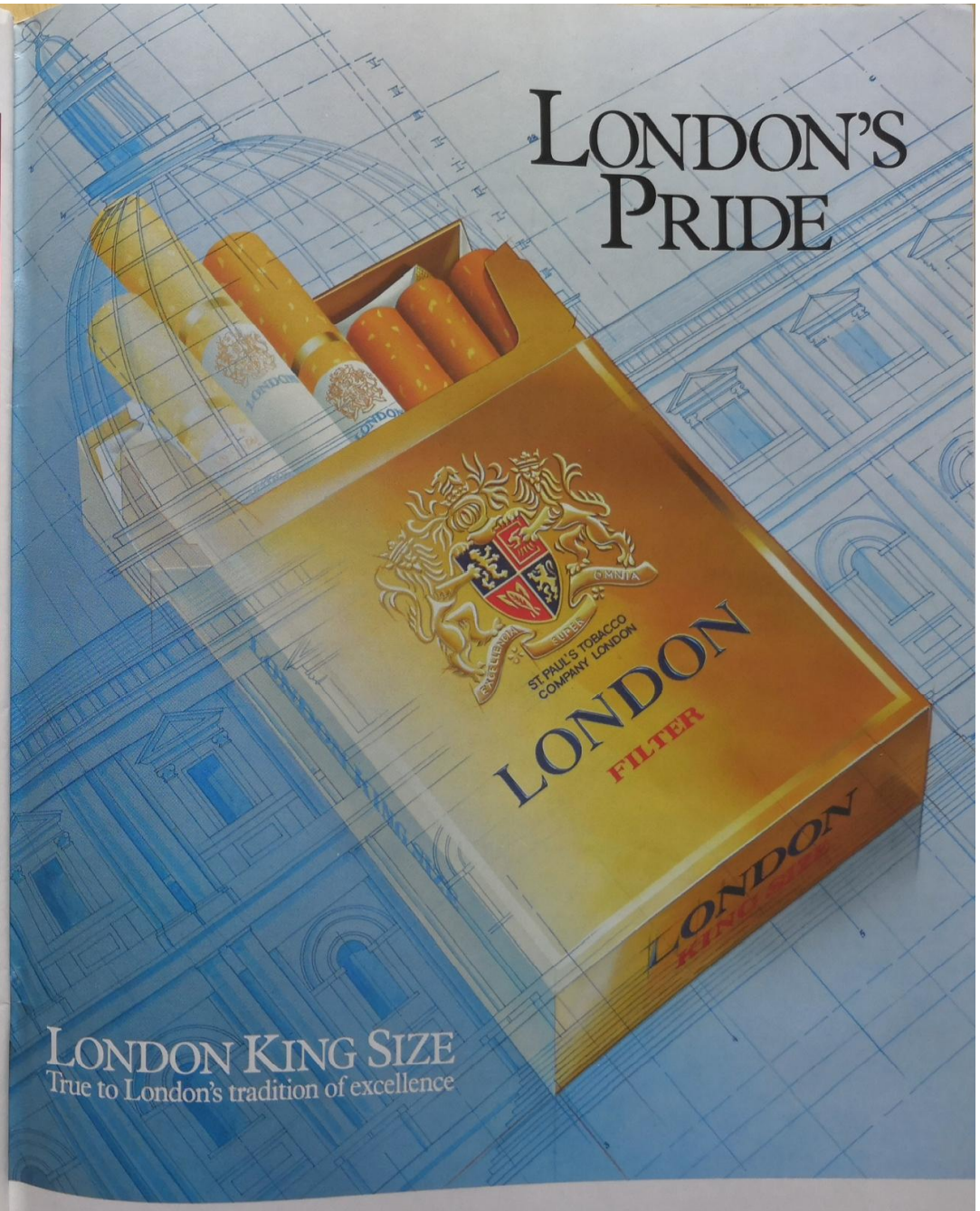
BACK FROM THE DEAD

Dear GPI,
To all the critics of the "new format" GPI, let me just say that it is far better than no GPI at all. Times change, GPI changes. You must admit its coverage of the Brazilian GP was thorough (especially qualifying). Although Bernard Asset is not there, DPPI's pics are certainly as beautiful and exciting as Bernard's photography. I was thrilled to see GPI come back from the dead, and although Rallying is meaningless to me, a 205 Turbo 16 blasting through a tight turn freaks me out. Almost. So welcome back to life GPI and just remember, Formula One is the most incredible sport in the world.
Salut Gilles!
Joel Gordon,
1411, rue du Fort,
Montreal,
Quebec.
PS. Why not print this one!
My father will be so proud of me!

WE ARE NOT AMUSED

Dear GPI,
I am writing in disgust about the way the races on the calendar are seemingly given to any venue. In recent years the seasons have been littered with insufficiently prepared circuits and shoddy facilities. The momentum of a F1 season is often halted by these "circuits".
Better rules should be enforced to put a stop to cities holding races simply through greed rather than for the enthusiasts' entertainment.
Yours sincerely,
Adrian King,
2, Regents Close,
Bedford
MK41 7XG

The production editors reserve the right to modify correspondence without notice. We do not necessarily agree with readers' views expressed in these columns.



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Watch out for John Player Special Team Lotus on television, racing at French Grand Prix, 7th July · Austrian Grand Prix, 18th August · Dutch Grand Prix, 25th August.

JPS9CGP1

(Dates and venues correct at time of going to press)

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